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MARINE CORPS INTELLIGENCE
FOR WAR AS IT REALLY IS

by

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The objective of this thesis is to evaluate the operational intelligence apparatus that exists to support the U.S. Marine Corps' tactical "warfighting" commander. The questions that drive such an analysis are: what are the fundamental uniformities of operations? What are the intelligence requirements for the most likely conflict? What is the intelligence architecture? What are the problems of intelligence support? What are the near-term and long-term remedies for intelligence support in these most likely conflicts? Based on the recurring intelligence requirements of historical antecedents, the thesis focuses on the lack of an integrated and complete intelligence architecture that supports the warfighting commander. This encompasses a lack of operational connectivity of intelligence within the larger command, control, communications, computers, intelligence, and interoperability (C4I2) system/architecture. One utility of this thesis is in isolating the prevalent, realistic, operational and intelligence requirements for the employment of Marines. Another is in expanding the concept of a Marine Corps intelligence architecture. Optimizing the Marine Corps for its most likely military responses requires focusing intelligence on "war as it really is."

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MARINE CORPS INTELLIGENCE FOR WAR AS IT REALLY IS

by

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ABSTRACT

The objective of this thesis is to evaluate the operational intelligence apparatus that exists to support the U.S. Marine Corps' tactical "warfighting" commander. The questions that drive such an analysis are: what are the fundamental uniformities of operations? What are the intelligence requirements for the most likely conflict? What is the intelligence architecture? What are the problems of intelligence support? What are the near-term and long-term remedies for intelligence support in these most likely conflicts? Based on the recurring intelligence requirements of historical antecedents, the thesis focuses on the lack of an integrated and complete intelligence architecture that supports the warfighting commander. This encompasses a lack of operational connectivity of intelligence within the larger command, control, communications, computers, intelligence, and interoperability (C^4I^2) system/architecture. One utility of this thesis is in isolating the prevalent, realistic, operational and intelligence requirements for the employment of Marines. Another is in expanding the concept of a Marine Corps intelligence architecture. Optimizing the Marine Corps for its most likely military responses requires focusing intelligence on "war as it really is."

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I. INTRODUCTION

The reason the enlightened prince and the wise general conquer the enemy wherever they move and their achievements surpass those of ordinary men is foreknowledge.

Sun Tzu
(Griffith, 1963, p. 144)

One of the most critical problems facing the United States Marine Corps in the 1990s is the task of establishing an intelligence architecture with the ability to meet intelligence requirements (IRs) of tactical commanders. If intelligence is to guide the operational decisions of a Marine commander, then intelligence support must be tailored to his requirements. Ultimately, the Marine Corps needs to implement an innovative and highly effective way to conceptualize and manage the cluster of organizations, doctrines, and high technology involved in the direction, collection, processing, and dissemination of intelligence. A good systems approach has not yet matured. In designing that intelligence architecture, the aim must be to consider its entirety with particular emphasis on system interfaces and interrelations, managing it in ways that are compatible with the characteristics and needs of warfighters.

This thesis and proposition actually encompass numerous features. Fundamental IRs are the basic independent variables. The dependent outcome concept is the means for meeting the intelligence requirements—a functional architecture. Therefore, IRs must be articulated and well understood by all forces in the operational and administrative chains of

command in order to ensure tailored intelligence support. Given that Marines will be involved in future low-intensity conflict (LIC) environments, an analytical induction process which studies the recurring operational characteristics of the type of conflict, missions, organizations, and doctrines should prove useful in articulating the commander's intelligence requirements and analyzing the intelligence architecture. The Marine Corps intelligence community needs a vision—an image of the future, grounded by the requirements of "war as it really is."

A. BACKGROUND TO THE USMC FOCUS IN CONFLICT

A contemporary renaissance in military thinking has taken place since the mid-1980s. The Goldwater-Nichols DoD Reorganization Act of 1986 is representative of this push for modernization and the concept of military restructuring and rethinking currently taking place in the Department of Defense. One of the overriding intents of this legislation is to enhance the military's ability to accomplish tactical missions by refocusing strategy, contingency planning and execution in a low-intensity conflict (LIC) arena. The establishment of the unified command, United States Special Operations Command (USSOCOM), in April 1987 is evidence of this intent.

While the Marine Corps maintains its unique character as "soldiers from the sea" and "a force in readiness," with a primary mission to continue the prosecution of a naval campaign, the Corps has also sought to establish a sea-based, LIC strategy and doctrine. The Marines have replaced the term "amphibious" with "expeditionary" when referring to their fighting forces. Using the Marine Air–Ground Task Force (MAGTF) organizational concept, they have created special operations capable Marine Expeditionary Units

(MEU(SOC)s). The MEU(SOC) is advertised as a naval power projection force possessing the widest variety of capabilities to meet the uncertainties and challenges of today's fluid threat environment. The Commandant of the Marine Corps, General A. M. Gray, has stated in his analysis of the changing world that, "It is the Third World, the so-called low-intensity conflict arena, where we are most likely to be committed this decade." He said this in 1986, but it is even more true today considering the crumbling of the Berlin Wall, the disintegration of the Warsaw Pact, and the effective end of the Cold War. Although the threat of conventional war with the Soviet Union is greatly reduced, the challenges posed by "conflicts short of war" have arguably grown. In the 1990s, it is likely to be the North-South tensions (disparities between the industrialized rich countries in the Northern hemisphere versus the Third World countries in the Southern hemisphere) that could be the greatest threat to world order. Considering its small size, the Marine Corps has focused on LIC and expeditionary combat as its *forté*.

B. SCOPE AND PURPOSE

Intelligence drives operations.

General A.M. Gray,
Commandant of the Marine Corps
(M. C. Intelligence Conf., Sept., 1987)

A critical link exists between operational missions and required intelligence. Since intelligence data does little good if it is not tailored to the operational requirements of the specific situation, the essence of the intelligence officer's job is to provide operational intelligence support and assist the tactical commanders in implementing their operational plans.

Establishing a generic list or baseline of intelligence requirements within the context of "war as it really is" is an essential step for future analysis of an intelligence architecture that meets the IRs.

In view of today's fast-paced, multi-threat environment, the ability of a Marine Air-Ground Task Force (MAGTF) commander to effectively receive and disseminate combat and tactical intelligence to higher, adjacent, and subordinate forces is critical in ensuring knowledgeable decisions to support successful mission completion. It is therefore paramount that the intelligence support system/network be reliable, responsive, and simply connected. Such a connected network assists the commander in implementing his operational plans, particularly in a special operations/low-intensity conflict (SO/LIC) environment. It is in this capacity that connectivity of intelligence overlaps with mission execution.

The *purpose* of this thesis is *to reveal the fundamental uniform intelligence requirements of Marines in conflict*, as a functional area of uniform operational requirements. The thesis then portrays the essence of the current Marine Corps command, control, communications, computers, intelligence, and interoperability (C^4I^2) system and underlying principles of the organizations, doctrines, and technologies of an intelligence architecture.

Chapter II considers LIC as the future environment and examines particular military roles. What aspects of LIC are most important to Marines? Are there certain requirements Marines can expect to fill? How must intelligence support be tailored to satisfy the Marine commander's essential mission planning and execution tasks? The National Command Authority (NCA) has historically chosen an Amphibious Readiness Group (ARG) with a

Marine battalion landing team (BLT) as its core unit to conduct peacekeeping and peacetime contingency operations. There are basic operational and intelligence support issues which establish themselves time and time again.

II. LOW-INTENSITY CONFLICT AND MILITARY REQUIREMENTS

One senior U.S. diplomat remarked that in low-intensity conflict as in real estate, there are only three things that matter. In real estate, these are location, location, location; in low-intensity conflict they are intelligence, intelligence, intelligence.

General Paul F. Gorman, USA
(Gorman, 1990, p. 117)

Dozens of books, volumes of articles and other exploratory and explanatory research on the subject of LIC have been written. Authors and doctrinal publications continue to focus on the Marine Corps' role in this area. Major Richard Hobbs, USMC, focused his Master's Thesis on the subject at the U.S. Army Command and General Staff College in May 1988, by asking the important question: "Are we prepared to fight in the low-intensity conflict environment?" (Hobbs, 1988, p. 110) He identified LIC in terms of "operations short of war" and "small wars." Hobbs concluded that while there is no cookbook formula for LIC and fighting in it, flexible application of both political and military means are required. The fundamental distinction between LIC's unconventional nature and more conventional conflicts is that "the key characteristic is one of people and not terrain." (Hobbs, 1988, pp. 103-104) Intelligence has a unique and critical role in an environment where conventional combat is carefully avoided by the enemy. Knowing and understanding one's enemy comes down to primarily superior human intelligence collection and analysis, vice national technical means. The operational intelligence support to a small war must be made for the lower echelons of command. Also, success in this environment is dependent upon

the commander's mental capacity and character to respond in an unstructured ambiguous environment.

All the literature suggests that the United States has tremendous difficulty defining LIC and its role in unconventional warfare. This problem of definition is compounded by the fact that though the U.S. has fought contingencies in the Third World, it has never focused and built an intelligence capability to exploit that area. This chapter will explore LIC and examine the operational roles for which the Marines must prepare.

A. LOW-INTENSITY CONFLICT

Third World countries have been the location of nearly all conflicts requiring a U. S. response since World War II. These conflicts have included insurgency, counterinsurgency, guerrilla warfare, insurrection, border friction, coup d'etat and, more recently, international terrorism and narcotics trafficking. President Ronald Reagan encompassed these in the *President's Report to Congress on U.S. Capabilities to Engage in Low-Intensity Conflict and Conduct Special Operations*, February 1988. He identified low-intensity conflict as:

> the political-military confrontation between contending states or groups at a level below conventional war but above routine peaceful competition among states. It involves protracted struggles of competing principles and ideologies, and its manifestations range from subversion to the use of armed forces. It is waged by a combination of political, economic, international and military instruments. These conflicts are often in the Third World, but can contain regional and global security implications.[1]

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[1]Quoted by the Joint Chief of Staff in JCS message 1114122, February 1988, amending *JCS Pub. 1* from the unpublished classified document *President's*

The Armed Forces are using this definition to guide their doctrine and publications on the subject of LIC.

The President's *National Security Strategy of the United States 1988* identified LIC as a particularly troublesome form of instability that provides "fertile ground for unrest and for groups and nations wishing to exploit unrest for their own purposes." This type of conflict threatens the United States when it assaults our national interests, security, values, political foundations, friends and allies. (The White House, 1988, p. 34) It appears the U.S. can expect that the chronic political and economic instabilities of the poorer nations of the globe will continue to cause an ambiguous, protracted predicament of neither conventional war nor peace. These may be fueled by the revolutionary left, the radical right, internal ethnic hostility or some other condition. (Sloan, 1990, p. 42)

B. MILITARY REQUIREMENTS OF LIC

Hobbs outlined four basic military missions requirements of LIC: Foreign Internal Defense (FID); terrorism counteraction; peacekeeping operations; and peacetime contingency operations. These are also found in *U.S. Army Field Circular 100-20 Low-Intensity Conflict*, (1986). **Foreign Internal Defense** is participation by civilian and military agencies of the U.S. to help a friendly government "free and protect its society from subversion, lawlessness and insurgency." (Hobbs, 1988, p. 69) This includes security assistance or mobile training teams to advise and train local forces. FID is what is going on in El Salvador today and is the likely U.S. response to insurgency. **Terrorism**

Report to Congress on U.S. Capabilities to Engage in Low-Intensity Conflict and Conduct Special Operations.

counteraction involves the use of specially trained military units striking terrorists before and after they act (Hobbs, 1988, p. 71). *Achille Lauro*, 1985 best fits this description. **Peacekeeping operations** are the introduction of military forces to achieve peace in areas of potential or actual conflict. The two types are cease-fire operations or law and order maintenance (Hobbs, 1988, p. 71). Beirut, 1982-84, is the obvious example of this. **Peacetime contingency operations** "are politically sensitive military operations characterized by the short term rapid projection or employment of forces in conditions short of war, e.g., strike, raid, rescue, recovery, demonstration, show of force, noncombatant evacuation, unconventional warfare and intelligence operations." (Hobbs, 1988, p. 72) Others have called this expeditionary combat operations (Bolger, 1988, p. 12). Rear Admiral Thomas Brooks, Director of Naval Intelligence, has labeled these as contingency and limited objective (CALO) operations (Brooks, 1991, p. 2). They encompass most of the military responses the U.S. has used, including the intelligence collection operations in the counter-narcotics war.

Some of these operations require a great deal of special training, others less so. Regardless, all combat forces in LIC must have the ability to arrive on the scene quickly, adapt to the unstructured operating environment, and accomplish their mission while restrained by unusual rules of engagement. (McMahon, 1990, p. 5). The political considerations (both national and international) and sensitivity of these operations often require a less visible military presence constrained in various regards.

Recent literature indicates that guerrilla warfare is no longer the likely LIC requiring a U.S. military response. In a March 1989 RAND study,

Revolutions without Guerrillas, J. D. Simon concluded that it is the threats to world stability caused by a "combination of political, social, economic and ethnic-religious forces in urban centers" which proliferate the LIC environment today, rather than guerrilla warfare and rural insurgencies (Simon, 1989, p. v). Evidence of this is that the U.S. has not been required to conduct counterinsurgency with any significant numbers since Vietnam. This is not to suggest that the U.S. should not develop military doctrine for combating insurgencies, but that it should focus on the more likely crisis scenarios and prioritize intelligence support efforts for those conflicts.

Bernard F. McMahon has offered a succinct list of U.S. military requirements that fit this newest definition of LIC in the 1990s. LIC missions for which the United States would require combat capabilities include:

- Forcible hostage rescue (such as Desert One and the *Mayaguez* operation);
- Evacuation of U.S. officials or nationals from hostile situations in foreign territories (Beirut, 1976);
- Preemptive strikes against terrorists planning to commit violent acts, or retaliatory strikes once a terrorist attack occurs (Libya, 1986);
- Support of law enforcement authorities in the forcible apprehension of known terrorists or other international fugitives (the FBI apprehension of Fawaz Yunis);
- Armed escort to U.S.-flagged ships in combat zones (the Persian Gulf reflagging operation);
- Protection of U.S. property in foreign lands, particularly U.S. embassies, when local authorities prove inadequate or disinclined (deployment of U.S. military reinforcements to bases in Panama, 1987-89);
- Interdiction of armed narcotics traffickers (the recent promise by the Bush Administration to provide military support to the Colombian government if asked);

- Combat operations against insurgents in host countries unable to provide adequate protection to U.S. nationals (U.S. military advisers in El Salvador, 1982—);
- Combat operations against violators of cease-fires during U.S. participation in peacekeeping operations (Beirut, 1983);
- Limited strikes by U.S. general purpose forces or strikes by special operations forces to protect U.S. security interests (the invasion of Grenada). (McMahon, 1990, p. 4)

Using these examples, the utility of the military in LIC may not always be clear, but it is a fact. A ruthless focus must be made to determine what special requirements are there for a unit to be able to function operationally in LIC.

The Marine Corps as a conventional amphibious force has an inherent and historically proven capability to perform many of these missions. Chapter III will investigate war as it really is to Marines. First, where have Marines been since 1945? Then, five significant cases in which the Marines have been militarily employed are examined. The five historical antecedents of Marines in LIC prove that there are operational links and basic uniformities of organization, doctrine, and intelligence requirements that can be drawn over time.

III. WAR AS IT REALLY IS TO THE MARINE CORPS

One of the more useful and powerful methods for assessing the operational requirements of the Marine Corps is to base that assessment on where and how this country has really required its Marine Corps to respond. Five key historical cases are examined to ferret out these operational uniformities. Since 1945, Marines have operated almost exclusively in what is called LIC. The historical antecedents of actual military requirements provide a baseline of operational characteristics which show a link between missions and required intelligence. Here is a nearly complete list of where Marines have been since 1945:

- 1945-50: China; disarm/repatriate 630,000 Japanese.
- 1950-53: Korean War.
- 1953: Greek Islands; battalion 2/6 rescued earthquake victims; *Peacetime Contingency* Operation.
- 1954: Guatemala; During U.S.-supported coup against the government of Col. Jacobo Arbenz Guzman, battalion 2/8 stood by to protect American citizens/property; *Peacetime Contingency* Operation.
- 1955: Battalion helped evacuate 26,000 Chinese from mainland to Taiwan; *Peacetime Contingency* Operation.
- 1956: Alexandria, Egypt and Haifa, Israel; Battalion 3/2 evacuated U.S. nationals from Egypt and a U.N. truce team from Israel during the Suez crisis; *Peacetime Contingency* Operation.
- 1957: Indonesia; 3rd Marines stood by during an Indonesian revolt; *Peacetime Contingency* Operation.
- 1958: Lebanon; *Peacekeeping* Operation.
- 1961: Turkey; 3rd MEB landed a show of force to deter external communist pressure; *Peacetime Contingency* Operation.
- 1965-72: Vietnam; 3/9 was the first Marine BLT ashore.

- 1965: Dominican Republic; *Peacetime Contingency* Operation.
- 1975: Koh Tang, Cambodia; battalion 2/9 attempted hostage rescue and recovery of the Mayaguez; *Peacetime Contingency* Operation.
- 1976: Beirut, Lebanon; 34th MAU (BLT 1/8) conducted *Peacetime Contingency* Operation (NEO).
- 1982-84: Lebanon; *Peacekeeping* Operation.
- 1983: Grenada; *Peacetime Contingency* Operation.
- 1989: Panama; *Peacetime Contingency* Operation/Invasion.
- 1990: Liberia; *Peacetime Contingency* Operation (NEO).
- 1990: Somalia; *Peacetime Contingency* Operation (NEO).
- 1990-91: Kuwait; 90,000 Marines deployed in response to Iraqi invasion.

Except for Korea, parts of Vietnam, and Kuwait, all these missions have been in the LIC environment. It is obvious the threat environment has been the Third World arena. Out of the 19 examples, 15 of the missions have been peacekeeping operations and peacetime contingency operations. Additionally, it has been a BLT debarking from amphibious ships which has conducted most ground operations.

The remainder of this chapter will examine the uniformities of a Marine BLT conducting peacekeeping operations or peacetime contingency operations. Those were the criteria used for choosing the following five prevalent cases since 1945: 1) Lebanon 1958; 2) Dominican Republic 1965; 3) Lebanon 1982-84; 4) Grenada 1983; and 5) Liberia 1990.[2]

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[2]Time and space prohibit looking at all cases in detail. The most questionable examples which I might be accused of leaving out are Vietnam 1965-69 and Panama 1989. However, they do not fit the typical size unit, a BLT.

A. LEBANON, 1958: OPERATION BLUEBAT

In 1958, Operation BLUEBAT was the largest U.S. military operation since Korea. The mission was essentially to keep the peace in a country split by external, Arab-supported revolution. In May, 1958, tensions erupted into armed insurrection against the Lebanese President, Camille Chamoun. Externally, Syria had extensive armored forces poised on the border for an invasion; internally, diverse Moslem and Christian religious groups were violently opposing one another in maneuvers for self-protection and internal political hegemony.

The decisive warning "tip" to the U.S. government for possible U.S. intervention came from Chamoun himself in May in the form of an appeal to the United Nations for diplomatic pressure on Syria and to the U.S. for standby aid. No significant increase in U.S. intelligence collection on the brewing problem was initiated other than using diplomatic monitoring. Task Forces 61 and 62, the Navy and Marine amphibious elements of the Sixth Fleet, began to prepare for possible landings in the Middle East. The U.S. decision for a crisis intervention was based on a surprise event on 14 July, 1958. The king of Iraq was murdered in a forcible coup d'etat, leaving Lebanon as the only Arab nation with strong Western ties. (Shulimson, 1983, p. 7) This event greatly challenged any remaining stability of the Lebanese government and peace in the Middle East.

On 14 July President Eisenhower directed the JCS to issue the warning order to land forces in Lebanon on 15 July "to support the legal Lebanese government against any foreign invasion," specifically against the Syrians, only a few hours away. Later that day the order to land was specified for 1500

15 July. Time was the critical factor in all mission planning at that point. Admiral J.L. Holloway, Commander in Chief, Naval Forces Eastern Atlantic and Mediterranean (CINCNELM) had designated Brigadier General S.S. Wade, USMC, as Sixth Fleet landing force commander for the mission. (Shulimson, 1983, p. 8)

Wade was the first to sense the extreme ambiguity of the mission and situation in Lebanon. In a 1959 article he stated, "Although not an actual combat situation, it was a true test of many of our present concepts and techniques...." (Wade, 1959, p. 10) The selection of H-hour was determined more by political and less by tactical considerations; the problem of conducting an operation on such short notice was that the three BLTs of the Marine Force were not in position to land quickly. Not knowing whether it would meet any opposition, BLT 2/2 was landed with the assumption that it would be able to cope with whatever might develop. Possible threats included rebel resistance groups numbering approximately 10,000, a Syrian Army composed of 40,000 men and associated armor, and the possible disintegration of the Lebanese Army into opposing factions. (Shulimson, 1983, p. 12) Fortunately, BLT 2/2 found no enemy opposition, but bikini-clad sunbathers; no armor, but soft drink carts. The primary objective—Beirut International Airport—was secured within an hour. (Wade, 1959, p. 13)

The political-military situation in Lebanon was very complex. The point of contact became U.S. Ambassador McClintock, who related that the Lebanese Army commander, General Chehab, did not want the Marines ashore. McClintock also relied heavily on his naval attache to provide liaison between Lebanese and U.S. military units. It became apparent that no

political or military body in Lebanon was in stable control of its own existence. There were threats on President Chamoun's life, to the extent that Marines were asked to protect him. Chehab had to personally guarantee the safety of his President. Choosing to firmly back the Chamoun government and forming a mutually supportive understanding with Chehab proved to be one of the wisest operational decisions the Marines made. Ironically, a U.N. observer suggested that the Marines were backing the wrong side of the conflict, but that was dismissed by the BLT 2/2 Commander. (Shulimson, 1983, p. 16)

On 16 July, BLT 3/6 landed across the beach at the airport and relieved BLT 2/2. BLT 2/2 continued on to Beirut with guidance to keep a low profile and allow the Lebanese Army to always remain between them and any rebel factions. In effect, the Lebanese Army was protecting the U.S. forces, despite their lack of will in dealing with the rebels prior to U.S. intervention. The close liaison between the U.S. and Lebanese forces allowed for a visibly cohesive operation. This had a strong psychological effect on the Lebanese civilians. (Wade, 1959, p. 15)

By 31 July, Chehab was elected President of Lebanon and the U.S. Army had arrived and assumed command of what was now a joint operation. On 14 August, BLT 2/2 reembarked on Sixth Fleet ships. As it turned out, 16 July was the highpoint of Operation BLUEBAT. Subsequent operations were confined to holding operations. (Shulimson, 1983, p. 42)

The operational characteristics of Operation BLUEBAT can be summarized as follows:

- Political considerations caused a time-compressed environment and dominated tactical concerns.

- BLT 2/2 landed without the logistics and fire support available on other ships. This was a deep concern since Syrian tanks were three hours away.
- The conflict was ambiguous, but the commanders found that their objectives must be decisively pursued.
- The Marines had to negotiate for objectives rather than seize them.
- The peacekeeping operation required extreme discipline. Every Marine had to suppress his trained tendency to enter conflict aggressively and violently. No friendly casualties resulted from the operation.

The operations of Marines in Lebanon, 1958, from a perspective of intelligence support to the tactical level, can be summarized as:

- Time-compression from warning order to execution order also greatly hindered the intelligence support to BLT 2/2.
- No beach reconnaissance was done, which resulted in unanticipated difficulties in the initial/critical landing on 15 July.
- The estimate of the enemy size, strength, and disposition was virtually lacking for 2/2.
- The complexity of the political-military structure of Lebanon proved tough to figure out, even when 2/2 arrived. Ultimately, political and socio-cultural intelligence was missed more than traditional military intelligence.
- Human intelligence (HUMINT) available from liaison with the embassy personnel and subsequently from the Lebanese Army proved to be the most useful type of intelligence. A pre-landing liaison with the Embassy would have reduced much of the initial ambiguity. HUMINT collection against the various rebel and religious factions was the primary means toward sorting out the nature of the enemy. Basic patrolling by combined and unilateral forces told a lot also.
- Two fundamental problems were the lack of linguists and up-to-date maps. As BGEN Wade pointed out in 1959: Using local personnel as interpreters in the political turmoil in Lebanon emphasized a need within the Marine Corps for qualified linguists to be available for employment with "brush fire" forces in all areas of possible commitment (Wade, 1959, p. 17).

B. DOMINICAN REPUBLIC, 1965: OPERATION POWER PACK

American intelligence reported in early 1965 that two dissident groups may attempt a coup against the civilian junta government of the Dominican Republic. Despite agreements with the Organization of American States (OAS) not to intervene in Latin American countries without consulting it, the U.S. responded militarily in April 1965 to a revolt centered in the capital, Santo Domingo. The revolt appeared to present a serious threat to the safety of thousands of foreign nationals in the city.

On 24 April, with the U.S. Ambassador in the U.S. and the U.S. Naval Attache out of Santo Domingo, a coup was initiated against the ruling-group government led by Donald Reid Cabral. President Reid quit and Santo Domingo was found in a state of anarchy due to various mobs and political parties vying for freedom and power. With inherent suspicion of a communist-led party seizing power, on 25 April President Lyndon Johnson authorized a contingency operation by CINC Atlantic to protect 1,200 American lives and property. There was a subsequent mission to ensure communists did not gain political control.

The ARG (Task Group 44.9) and 6th MEU arrived on station off the coast of Santo Domingo early on 26 April. The number of evacuees grew to 3,000. The American Embassy alerted U.S. citizens to prepare for evacuation and designated the largest hotel in Santo Domingo as the assembly point for evacuation from the Haina pier. On 27 April, unarmed elements of BLT 3/6 began the evacuation by boarding evacuees onto U.S. Navy ships tied pierside. The town was filled with rebels who were establishing various strongholds and the American Embassy was urging a "somewhat friendly"

military junta to take control of the Dominican Republic government. The military junta asked for the U.S. to help restore peace in the country and this changed the nature of the operation.

On 28 April, more than 500 Marines of BLT 3/6 began coming ashore under combat conditions by helicopter. On the 29th the ARG and MEU commanders met with the Ambassador to evaluate the situation firsthand, and found that the rebels where expanding their operations. The rest of 3/6 came ashore at the Haina pier with heavy equipment on the 30th; on the same day two U.S. Army airborne battalions landed.

Military necessity now took precedence over political restraint. Within two weeks 22,000 American troops were on the ground to: 1) protect American lives; 2) halt political and street violence by enforcing a cease-fire; 3) stop a communist takeover; and 4) provide the opportunity for free elections. The U.S. intervention lasted eighteen months.

From the Marine Corps' perspective the operation exploited the expeditionary flexibility of forward deployed, sea-based, sustainable power projection forces into a multi-faceted mission environment. The operational characteristics of Operation POWER PACK are summarized as:

- The BLT was required to operate under rapidly changing and sometimes conflicting mission requirements. The mission changed from an evacuation to a stability operation.
- Command and control from ship to shore was a serious problem which required the aid of a ham radio operator and equipment. This required extensive face-to-face meetings between all U.S. parties and exhaustive liaison efforts with the new junta to gain operational information.
- Sniper fire was the greatest threat to the Marine force.
- The mission became a joint mission after two weeks.

A basic list of intelligence issues for the operational support of the Marines is:

- The primary source of intelligence was the American Embassy, which had the least convoluted picture of the political-military situation.
- Open HUMINT sources provided the most useful information. Much of the essential information was acquired by Marines through contact with the Dominicans once the Marines were ashore.
- Unfortunately, little current information existed on the identity, disposition, location, and intentions of the various political factions existing in the Dominican Republic. Intelligence was lacking on the key facilities used, such as the Embassy, main hotel, Haina pier, and potential aircraft landing zones. Some intelligence information was withheld from operational commanders because of an obsession with operational security. (Yates, 1988, p. 176)
- Inaccurate maps caused Marines to stray into rebel territory.
- The lack of Spanish linguists prevented immediate and smooth interaction with friendly and opposition forces.
- Aerial reconnaissance missions excessively took 12 hours for mission turn around to acquire imagery intelligence (IMINT).
- Despite technological advantages, signal intercept operations did not work against the rebels' hand-held, Japanese-made radios. A special intelligence communications net had to be deployed to Dominican Republic to exploit what signal intelligence (SIGINT) was possible.
- There was a great need for extensive Civil Affairs and Psychological Warfare capabilities, as the main thrust of the U.S. effort became focused on the political-economic-sociological fields (Director of Marine Corps History, 1970, p. 70).

C. LEBANON, 1982-84

No single military mission cost more American lives since Vietnam than that of peacekeeping by Marines in Beirut, Lebanon. On 23 October, 1983, a suicide bombing attack by a single terrorist killed 241 Americans, of whom 220 were Marines. For Marines, this was the highest loss of life in a single day

since D-Day on Iwo Jima 1945 (Frank, 1987, p. 3). Due to instantaneous worldwide media attention to the event and ultimate mission failure, analysts tended to focus only on that one part of the Marines' time in Lebanon.

Violence surrounding numerous political and religious rivalries, both internally and externally generated, and international efforts to alleviate it had been going on in Beirut ever since BLT 2/2 landed there in July 1958. Political-military-social stability had never existed for long. In June 1982, Lebanon became the fighting ground for the Israeli Defense Force against the Palestine Liberation Organization (PLO) and Syrian forces. The Israelis had surrounded Beirut in an effort to finally neutralize the PLO bastioned there.

On 15 June, the 32d Marine Amphibious Unit (MAU), centered on BLT 2/8 as the Ground Combat Element (GCE), was placed on a three hour alert 100 miles off the coast of Lebanon. Its mission was to evacuate American citizens from Lebanon. The order to execute came on 24 June and 580 noncombatant evacuees were taken, without incident, by landing craft from the port city of Juniyah to amphibious ships. The MAU remained in the area for possible subsequent contingency operations.

On 25 August 1982, at the request of the Lebanese government, U.S., French, and Italian military units formed a Multinational Force to supervise the evacuation of the PLO from Beirut. BLT 2/8 was to secure the port of Beirut in conjunction with the Lebanese Armed Forces. With all forces under arms and very excited, the PLO evacuation began on the 25th and ended on 3 September. On 10 September, the 32d MAU left Lebanon for the second time and the peacekeeping mission was considered a huge success.

On 14 September, the Lebanese president-elect Bashir Gemayel was assassinated. On 16 September, a massacre of Palestinian refugees occurred in West Beirut. On 29 September, the 32d MAU and BLT 2/8 returned to begin the now contested, eighteen month mission to provide "... a presence in Beirut, that would in turn help establish the stability necessary for the Lebanese government to regain control of their capital. The mission required the 32d MAU to occupy positions in the vicinity of Beirut International Airport and establish and maintain close continuous liaison with the French, Italian, and Lebanese forces." (Frank, 1987, p. 23) The mission was diplomatically driven and was not tactical in nature. The Multinational Force's presence was supposed to have a stabilizing effect on the political morass surrounding the government of Lebanon.

The airport area, which BLT 2/8 was to secure, was in the midst of an area populated by Shiite Muslims who had close religious ties with Iran and venerated the Ayatolla Khomeini. The force faced the threats of terrorism and a considerable number of unexploded munitions, left from heavy fighting. To do the job, the MEU requested and received extra combat engineer, interrogator/translator, explosive ordnance disposal, public affairs, preventive medicine, fire support, and intelligence detachments.

During the lengthy presence/peacekeeping mission units changed but they never were larger than a MAU size (1,500 Marines and sailors). On 30 October, the 24th MAU (BLT 3/8) replaced the 32d MAU (BLT 2/8) in place at the airport. In February 1983, 22d MAU (BLT 2/6) replaced the 24th MAU.

Due to political considerations, many tactical concerns were neglected such as occupying certain key high ground around the airport. Other

incidents arose. On 2 February, 1983 a Marine captain used a pistol to prevent three Israeli tanks from passing through a joint U.S.-Lebanese checkpoint. On 15 March, 1983 an Italian patrol was ambushed by unknown terrorists. On 16 March, a BLT 2/6 patrol was "terrorized" by a lone hand grenade. In April, the American Embassy was bombed by a terrorist driving a van; 63 people were killed. This incident added the mission of security to the earlier mission of presence/peacekeeping. In May, artillery rounds landed for the first time inside the Marines' position, and 24th MAU (BLT 1/8) relieved 22d MAU (BLT 2/6). During July and August, the Marines came under the heaviest artillery and rocket fire to date. They were described by many as sitting ducks (Frank, 1987, pp. 58, 64, 75, 80). The intelligence indications warned the Marines that they were targeted by terrorists (Frank, 1987, pp. 74, 78, 92). HUMINT from Lebanese contacts indicated a large bomb had been moved into Beirut 4 to 5 days ahead of time in preparation for bombing the Marine compound. The information never got to the Marine commander. HUMINT was not cycled and fused aggressively enough and the political presence mission retained strict rules of engagement such that personal and unit defenses were not improved. On 23 October the bombing occurred in Beirut.

On 19 November, the 22d MAU relieved the 24th MAU. Until 26 February the 22d MAU (BLT 2/8) responded much more vigorously to all direct attacks from the various factions opposing them in Beirut. They dug in deeper than before and used deception techniques to protect themselves. Offensively, for the first time, the 16-inch guns of the *USS New Jersey* were used to respond to enemy indirect fire. In February 1984, the 22d MAU began

evacuation operations of more than 700 Americans, and by the 26th the MAU left Beirut having failed in keeping the peace.

The operational fundamentals can be summarized as:

- Political and diplomatic considerations took precedence over military and tactical requirements.
- The missions changed fluidly and required Marines to be employed in a variety of limited and precarious ways.
- Differing from Lebanon 1958, the Marines were trying not to overtly assist the Lebanese Army because it made them cross the line of neutrality; at the same time, they had a mission to train Lebanese armed forces.
- The rules of engagement (ROE) were very restrictive and allowed very few Marines to have loaded weapons against ambiguous threats which all had "loaded weapons" and few self-imposed restrictions.
- Patrolling became the primary means to exhibit a presence, but became routine and self-defensive rather than offensive in nature as did the necessity for hundreds of thousands of sandbags and static checkpoints.
- All operations demanded the greatest of personal discipline by Marines.

Some key intelligence issues were:

- There was no updated port and beach study for Beirut which inhibited the Marines' initial NEO and PLO escort missions.
- There was a need for target intelligence against indirect fire assets of the various threats. They were not localized and identified in a timely manner for neutralization.
- Political and cultural intelligence was critical and needed to be fused to tactical military intelligence.
- There was no one conduit for the sharing of information from all the U.S. and foreign services.
- Counterintelligence and counter-terrorism predominated the intelligence effort.
- There was a need for a number of qualified linguists in French, Italian, and various dialects of Arabic.

- Primarily, HUMINT was required to sort out the depth of the politico-military factions operating in the urban Lebanon environment. Lebanese police and intelligence sources provided the best HUMINT.
- There was a tremendous amount of intelligence material available over time which necessitated a larger intelligence section on shore to assess the threat once it was perceived.

The Long Commission investigation into the 23 October barracks bombing concluded that the Marines in Beirut were not provided timely intelligence tailored to their specific needs in defending against the full spectrum of threats. The commission's fundamental recommendation was for the establishment of an intelligence fusion center which would tailor and focus "... all-source intelligence support to U.S. military commanders involved in military operations in areas of high threat, conflict, or crisis." The Commission also recommended that the CIA and DoD establish ways to immediately improve HUMINT support. (Long Commission Report, 1983, pp. 136-137)

D. GRENADA, 1983: OPERATION URGENT FURY

On 25 October, 1983, a combined force of U.S. Marines and Rangers, followed by 750 paratroopers and an Eastern Caribbean multinational force of 300 men, stormed ashore on the island of Grenada. It was variously called a rescue operation, an effort to restore order and democracy, a noncombatant evacuation operation, and an invasion. The operation was in response to a request from Grenada's Governor General Sir Paul Scoon to restore the opportunity for democracy and to remove the threat of a Soviet/Cuban-sponsored revolutionary communist party takeover. There were also 1,000 U.S. citizens, mostly medical students, who were possible hostage targets.

On 18 October, the 22d MAU (BLT 2/8) was en route from North Carolina to Beirut to relieve the 24th MAU (BLT 1/8). On 22 October it was ordered to sail south toward Grenada. Without much guidance, the tactical commanders had the impression their likely mission was a NEO. That mission changed to: 1) protect and evacuate U.S. and designated foreign nationals; 2) neutralize Grenadian forces; 3) stabilize the internal situation; and 4) maintain the peace. The ARG/MEU received its mission order on 23 October. With less than 30 hours until H-hour, the BLT and aviation squadron began planning for the missions of seizing the Pearls Airport and the port of Grenville, and of neutralizing any opposing force in the area. (Spector, 1987, p. 5)

There was a real dearth of information about Grenada available for planning; there were no tactical ground maps and the single nautical chart available used 1936 data. The primary landing plan had to be changed within an hour of execution from a surface assault to a heliborne assault as a result of beach reconnaissance by the SEALs. Aerial photos of the landing zones proved misleading as palm trees and marshy soil inhibited the landings. One surprise during the operation was the local populace, which welcomed the Marines to the point of identifying members of militia and Army. Locals even guided Marines into the countryside to capture caches of weapons.

The U.S. Army Rangers had more opposition in conducting their assault and a company of Marines and four helicopter gunships had to be dispatched to help. Most operations involving Marines and soldiers were done without direct communications due to interoperability problems and no advanced coordination. The overall result was that Marine and Army units were

unaware of their close proximity to each other. By 2 November the Marines were reembarked and on their way to Lebanon for another type of operation.

URGENT FURY had these operational characteristics from the Marine Corps perspective:

- It was a peacetime contingency executed in a "no time for detailed planning" environment. Apparently, the choice by national decisionmakers for operational security prevented the ARG/MEU from being informed of any details of the operation as they became available.
- It was a fully joint operation by forces with different operational styles. Unfortunately, the commanders spent almost half of their time dealing with higher authorities to give and get operational information.

Operation URGENT FURY, like Lebanon, was closely examined by many analysts for "lessons learned." Some of the key issues of intelligence support are:

- The intelligence estimates given Marines were oversimplified and wrong. Operational intelligence reports overestimated the strength but underestimated the fighting spirit of Grenadian forces. The Cuban forces were underestimated in both numbers and will to fight. (Metcalf, 1986, p. 284)
- Tactical intelligence collected by the warfighters themselves is what guided the operations. This tactical data was from radio monitoring of Cuban transmissions, HUMINT gathered from locals and detainees, and organic ground and air reconnaissance.
- A large intelligence failure was determined to be the lack of common maps and charts of the operating area. On 2 November, as Marines were leaving the area, new charts from the Defense Mapping Agency were made available.
- Finally, there was little evidence of national HUMINT to support the operation (Metcalf, 1986, p. 296). In this type of conflict environment HUMINT collection needs were greater than technical collection needs.

E. LIBERIA, 1990: OPERATION SHARP EDGE

In May of 1990, the 22d MEU(SOC) "changed operational procedures and control" from the Atlantic Fleet to the Sixth Fleet in the Mediterranean Sea in Toulon, France. On 25 May the ARG/MEU received a Joint Chiefs of Staff (JCS) deployment order through Sixth Fleet to prepare for a NEO in Monrovia, the capital of Liberia. (Command Element, 22d MEU(SOC), 1990)

The civil war-torn country was on the verge of collapse as ten-year President Samuel K. Doe's government and military were under siege from two separate rebel groups. Since December 1989, 10,000 lives had been lost in the internal conflict. (Michaels, 1990, p. 62)

With the initial tasking, the ARG/MEU task organized a Special Purpose Force, embarked it on a faster Navy destroyer, and deployed it to Liberia. A few days later the ARG with the remainder of the MEU arrived. Loitering unobtrusively off the coast, the force gained additional intelligence and coordinated with the American Ambassador. (Gray, 1991, p. 12) On 5 August, 1990, while the rest of the world watched the larger Operation DESERT SHIELD, a reinforced rifle company (237 Marines) provided security to the American Embassy and evacuated 62 American citizens from outlying communications sites. During the course of six months 2,400 American citizens and foreign nationals were evacuated. There was never a need to intervene in the Liberian conflict.

The key characteristics of Operation SHARP EDGE can be summarized as:

- Uncertainty in planning;
- Limited military objectives;
- The ultimate care of civilians, U.S. property and maintenance of order;

- The timing of the operation was not a military decision as much as political;
- The actual size of the landing force was not determined until the "11th hour";
- The duration of the execution of the operation depended on the hostile threat to various civilians, nationalities, and locations.

There were two basic issues of intelligence support for Operation SHARP EDGE:

- A considerable amount of organic and external intelligence collection and analytical resources was dedicated to a relatively small force and objective area;
- Embassy personnel and advanced party personnel provided the most useful political intelligence, indicating HUMINT was a critical means of collection, and development of the operational situation occurs ashore.

IV. UNIFORMITIES IN MARINE CORPS OPERATIONS IN LIC

A. A MODEL OF THE FUTURE

From the foregoing discussion there is empirical reason to believe that the next warning order given by NCA/JCS to a Marine Corps unit will be a military requirement to conduct a peacetime contingency or peacekeeping operation. It will be in an ambiguous Third World threat environment. The Marines' operating force structure will be centered on a battalion landing team as the ground combat element (a MEU(SOC) in today's jargon). The MEU(SOC) will of course exploit the flexibility of being forward deployed, sea-based, and self-sustainable in maintaining a limited presence ashore. It will be poised to operate independently in response to crisis situations when time does not allow deployment of a larger force, or in coordination with the deployment of forces from CONUS or other theaters of operation should the operation require an early joint response. There are a variety of situations and environments in which the MEU must be prepared to operate.

The MEU and Naval Amphibious Squadron (PHIBRON) of about four ships will conduct their planning en route to the objective prior to the assault. There will be a time-compressed planning and execution environment. This will have certain ramifications on the ability to command and control, and to gather required intelligence. Aggravating this already difficult situation is the fact that the amphibious force may shift from one theater commander's control to another's. Additionally, the Marine element is under naval control afloat and Marine control once it is

established ashore, where the expeditionary force will largely be on its own once it is committed.

The tactical commanders of the ARG/MEU will first require the most up-to-date maps and charts of the area of operation (AO). Wide area imagery coverage of the AO and recent point imagery of specific areas will be desired. If there are facilities and installations such as ports, airfields, embassies, and urban areas that are to be occupied, the commanders will want even more detailed maps, photos, and textual explanation. All products are expected to be accurate and up-to-date. The commanders must have an accurate idea of friendly and opposing military and political capabilities and intentions. This intelligence will be a compilation of textual database and recent HUMINT, IMINT, and SIGINT. Reasonably, the commander will want to have "eyes and ears on the target" before putting forces in, to enable more flexibility in planning and using surprise and timing to his advantage.

Basically, when forces go ashore they want to "know it all" and travel light. The commander believes that to get in and out of the conflict environment as fast as possible is likely the best way to both accomplish the mission and save sailors' and Marines' lives.

This scenario is a reasonable one given the circumstances which keep recurring. It is the basis from which MAGTF commanders view future contingency operations. The scenario also establishes an understanding of problems encountered in satisfying the tactical commander's intelligence needs.

B. REVIEW OF THE FUNDAMENTALS

Characteristically, the contingencies occurred in less developed regions of the world, often in urban areas, about which little information was available to the Marine force. The operational environment presented many uncertainties and little time to resolve them. The missions were high-risk, high-gain military operations of great political or military sensitivity.

There are fundamental uniformities of operational and intelligence support issues which established themselves time and time again in "war as it really is" to Marines. General operational issues were:

- The missions were primarily LIC peacetime contingencies and secondly, peacekeeping operations.
- The nature of the conflict environment and mission was ambiguous. Usually mission objectives had to be achieved through negotiating with host authorities rather than physical seizure.
- A battalion landing team was the basic size of the unit which conducted ground operations.
- Planning time prior to execution was very limited and planning occurred at sea. Planning problems for tactical units resulted from "higher headquarters'" need for OPSEC—the tactical commander was purposely left "in the dark."
- Political sensitivities and diplomatic considerations dominated the tactical concerns of the commander.
- Limited presence and/or low visibility was required by the Marine force.
- Decisive action, though difficult, worked in developing the ambiguous situation to meet Marine objectives. Successful operations resulted from decisively backing some recognized authority.
- Liaison early with American embassy personnel was critical in establishing the intent of the mission and sorting out the rules of engagement (ROE).

- Command and control communications from ship to shore was a serious problem.
- Countersurveillance and countersniper operations were critical.
- Extreme discipline on the part of individual Marines was a must, as ROE were very restrictive.
- The operations were joint or became joint within a few days.

Some of the recurring generic intelligence requirements were:

- National intelligence source information must be confirmed using direct support or organic assets to attain the detail necessary to conduct small, limited objective operations.
- Organic or direct support aerial reconnaissance was desired for responsiveness in a time-compressed environment.
- SIGINT was very necessary, but military signals collection tended to be ineffective against low-powered/low-tech communications devices.
- HUMINT was the most useful source of information and the most deficient. It came from embassy personnel, host government, military, and police agencies, interrogations of locals and elements of rebel factions, and from basic patrolling.
- Initial estimates of the enemy size, strength, and disposition were oversimplified. Current and accurate estimates were critical for effectively orienting the Marines on enemy capabilities and intentions.
- Beach and aircraft landing zone reconnaissance was critical and deficient. There was over-reliance on old data.
- Political-social-cultural intelligence was deficient for understanding and evaluating the seriousness of threats. The best sources were the embassy (if effective early liaison was made) and constant liaison with host agencies.
- Current intelligence on facilities around which Marines operated was critical for proper planning and execution.
- Maps were always out of date for the areas operated in, particularly in urban areas.
- Linguists were lacking in all cases. An ability to interpret locals and other friendlies was critical toward collecting reliable HUMINT and effecting liaison with host agencies.

- Intelligence communications with the embassy and from ship to shore was a recurring problem.
- The Marine Corps needed a Civil Affairs and Psychological Operations capability to deal with the political-economic-sociological aspects of the conflicts.
- A single intelligence center to process all-source information was missing. That center was desired to be as close to the tactical commander as possible and focused on his needs. It must be capable of interoperating with other services and countries.

Ultimately, the Marine Corps needs to operate within an intelligence network or architecture that is conceptually designed as a system of organizations, doctrines, and technologies that provides operational intelligence to the tactical commander. A thorough understanding of the important intelligence requirements is necessary in order to build a Marine Corps architecture. The Marine Corps must take the lead to articulate and bring its requirements to the forefront of national and theater command attention. This chapter was designed to provide insight on and narrow the scope of what IRs the Marine Corps might articulate first. Again, these IRs encompass certain operational characteristics that have established themselves over time and have become a "gap" in effecting successful mission completion. The lessons learned are not learned at all—it seems as if "powers that be" believe the Marine Corps is always embarking on a future unlike our past. Filling this gap is fundamental for intelligence connectivity to the most readily employed Marine combat force. Articulating and understanding IRs is certainly the first step in directing and tailoring intelligence support.

Chapter V presents the current operating force structure, the MAGTF concept. This is necessary for narrowing the subject to the BLT-based

MEU(SOC), and particularly the intelligence architecture needed to meet the baseline IRs of Marine warfighting commanders.

V. ORGANIZING FOR OPERATIONS

A. THE MARINE AIR-GROUND TASK FORCE (MAGTF) CONCEPT

When the Marine Corps deploys its forces, whether as an amphibious landing force (LF) or as an air contingency force (ACF), it "task organizes" into a unique force structure of command, ground combat, aviation combat, and combat service support elements (CE, GCE, ACE, and CSSE respectively). These operational forces of the Fleet Marine Force (FMF) form combined-arms teams called Marine Air-Ground Task Forces (MAGTFs) structured to accomplish a specific set of missions.

Another pertinent force adjustment occurred in 1988 with the creation of the Surveillance, Reconnaissance, and Intelligence Group (SRIG). This is the command focal point/structure that provides the MAGTF commanders with an enhanced organization for directing and coordinating all assets that conduct intelligence functions and direct action missions. (See Figure 1.) (*MAGTF Intelligence Operations (FMFM 3-21)*), 1990, pp. 7-2,3)

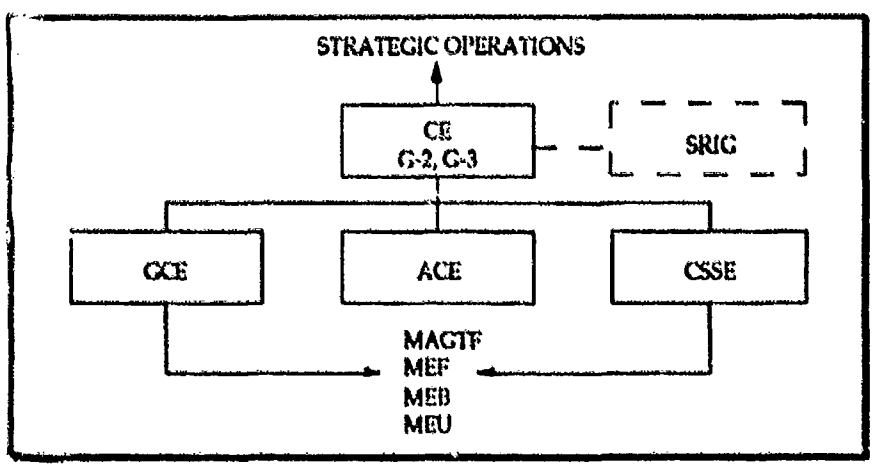


Figure 1. Organization of a MAGTF

In the FMF, Atlantic and Pacific, there are essentially three large MAGTFs called Marine Expeditionary Forces (MEFs), each consisting of a ground division, an aircraft wing, a force service support group, and a command element (commanded by a two- or three-star general). Each MEF can alternately form two Marine Expeditionary Brigades (MEBs), comprised of a reinforced infantry regiment (Regimental Landing Team, RLT), and aircraft group (Marine Aircraft Group, MAG), a Brigade Service Support Group (BSSG), and a command element (commanded by a one-star general). The smallest routinely used unit, the Marine Expeditionary Unit (MEU), consists of a reinforced infantry battalion (Battalion Landing Team, BLT) called the Ground Combat Element (GCE), a reinforced helicopter squadron referred to as the Air Combat Element (ACE), MEU Service Support Group (MSSG) and command element (commanded by a colonel). (Karch, 1988, p. 42)

Figure 2 is a summary of the distribution of MAGTFs in the Marine Corps today. (Hobbs, 1988, p. 41) Headquarters, Fleet Marine Force, Pacific (FMFPAC) is located at Camp Smith, HI and administratively commands I MEF at Camp Pendleton, California and III MEF at Camp Butler, Okinawa, Japan. The 5th MEB is at Camp Pendleton; 7th MEB is located at Twenty-nine Palms, California; 9th MEB is at Camp Hansen, Okinawa; and 1st MEB is located at Kaneohe Bay, HI. All three west coast MEU(SOC)s are based at Camp Pendleton. On the east coast, Headquarters, Fleet Marine Force, Atlantic (FMFLANT) is located at Norfolk, VA and the MAGTFs are all out of Camp Lejeune, NC, except for 4th MEB located at Little Creek, VA.

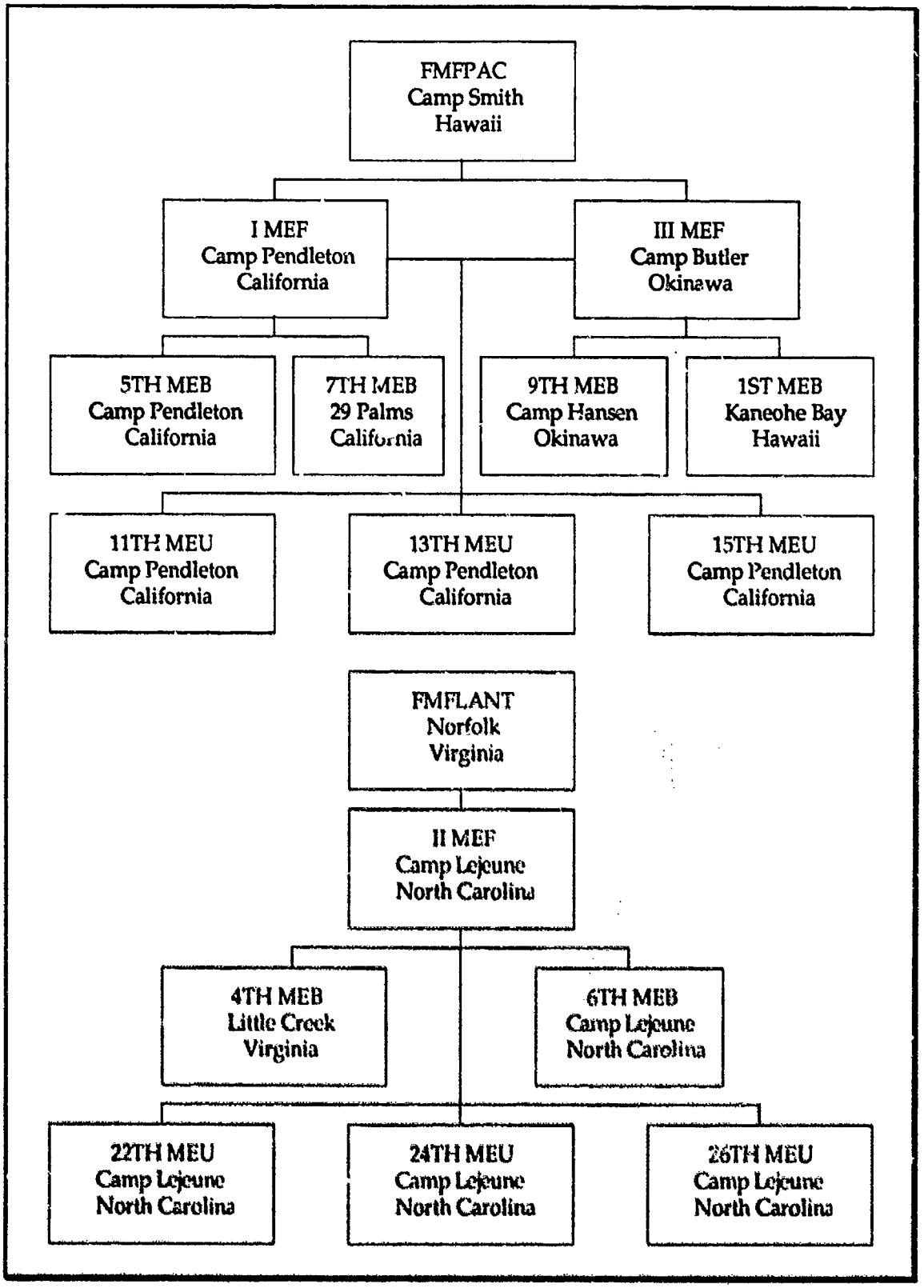


Figure 2. Distribution of MAGTFs

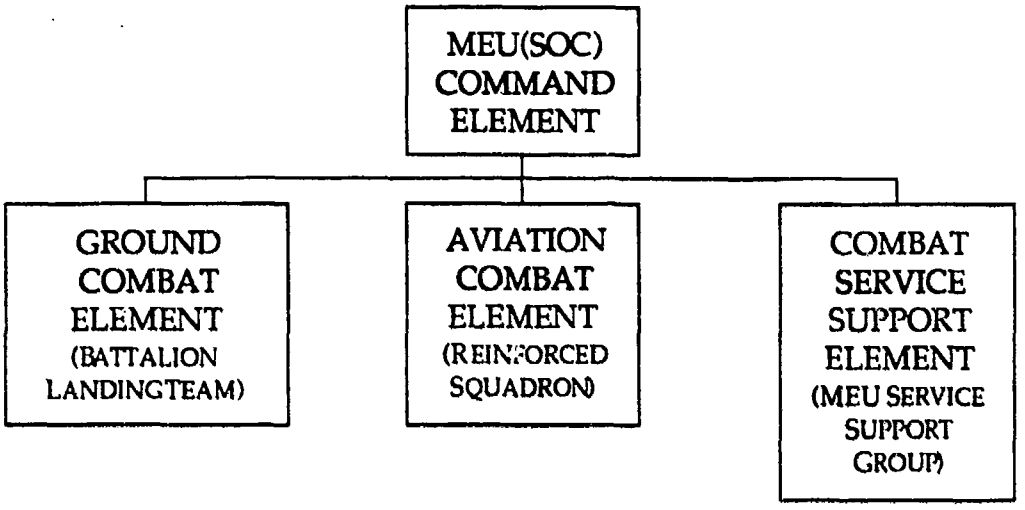
In 1983, a MEU was employed in the Grenada contingency operation. To further exemplify the flexibility of this concept, it is important to note that smaller tailor-made contingency MAGTF units can and have been used. This was the case in the Persian Gulf, PRAYING MANTIS Operation in 1988, where the GCE was a reinforced infantry company. Acting on evidence that Iran had laid mines that damaged the *USS Samuel B. Roberts* in the Persian Gulf, the U.S. retaliated with attacks on two oil platforms that had been used to help direct attacks on civilian shipping. The Sassan oil/gas separation platform was destroyed by Marines in a limited objective attack.

B. SPECIAL OPERATIONS CAPABLE MARINE EXPEDITIONARY UNIT (MEU(SOC))

The MEU(SOC)s, instituted in 1985, are of great importance. These units consist of approximately 2000 Marines and are forward deployed on amphibious ships through continuous unit rotation. At least two MEU(SOC)s are continually maintained—one with the Sixth Fleet in the Mediterranean, under U.S. European Command (USEUCOM), and another with the Seventh Fleet in the Western Pacific, under U.S. Pacific Command (USPACOM). MEU(SOC)s are the leading edge of the Marine Corps' deployed forces around the globe. They are designed to respond to crisis situations when time does not allow the deployment of a large force. They deserve being called the "pointy end of the spear," (Hobbs, 1988, p. 40) although the erratic operational/intelligence support historically rendered to the deployed Marine forces might justify the label "end of the whip."

Figure 3 shows the composition of the Marine Corps' MEU(SOC)s. (Linn, 1990, p. 39) The command element (CE) is the MAGTF Headquarters. The CE

establishes and executes the C^4I^2 necessary for the effective planning and successful completion of operations. (*MAGTF Intelligence Operations (FMFM 3-21)*, 1990, p. 7-4)



TROOPS

2,050 Marines plus 100 sailors assigned to Marine units (medical, dental, chaplain, etc.)

TOTAL: 2,150

AIRCRAFT

- 12-CH-46 medium light helicopters
- 4-CH-53 (D or E) heavy lift assault transport helicopters
- 4-AH-1 attack helicopters
- 3-UH-1 utility helicopters
- 6-AV-8B vertical/short takeoff and landing attack aircraft
- 2-KC-130 serial refuelers
- 20 Stinger surface-to-air missile launchers

GROUND COMBAT EQUIPMENT

- 5 tanks or 17 light armored vehicles
- 12 amphibious assault vehicles
- 32 Dragon missile launcher (antiarmor)
- 8 TOW missile launchers (antiarmor)
- 4-105mm howitzers
- 4-155mm howitzers
- 8-81 mm mortars
- 9-60mm mortars
- 20-.50 caliber machineguns
- 60-7.62mm machineguns
- 26-40mm grenade launcher

Figure 3. Special Operations Capable Marine Expeditionary Unit (MEU(SOC))

C SPECIAL OPERATIONS/LOW-INTENSITY CONFLICT (SO/LIC)

MEU(SOC)s will play a significant role in future limited wars in which the United States could employ forces. Forward deployed, limited in size and

poised for action, these forces operate with a strategically mobile fleet and provide the National Command Authorities (NCA) with considerable flexibility for responding to an unexpected crisis. They are independent and require little coordination with the deployment of forces from CONUS or other theaters of operation. An example of this independence and flexibility was Liberia, 1990, Operation SHARP EDGE. The MEU(SOC) loitered off the coast of that nation in a limited war environment. This unobtrusive loitering is an inherent characteristic of naval power projection.

MEU(SOC)s and the Navy and Marine teams which form ARG/MEUs must be capable of operating in a wide variety of situations and environments. It becomes impossible to do the kind of exact preparation when deployed that land basing offers. Therefore, the ARG/MEU has a difficult task and must plan while en route to the objective area prior to the assault phase. This creates a time-compressed planning and execution environment that has obvious ramifications on the ability to command and control and gather required intelligence on the enemy, weather and terrain.

The Marine Corps responded to the threat environment changing to LIC by applying its amphibious and expeditionary expertise and progressively upgrading the unit's skills through enhanced training and the addition of special equipment and tactics. Also, the Corps has incorporated a rapid response planning sequence into its C^4I^2 to support the following list of 18 capabilities/missions of the MEU(SOC):

- Amphibious Raids
- Security Operations
- Limited Objective Attacks

- Mobile Training Teams
- Noncombatant Evacuation Operations (NEOs)
- Show of Force Operations
- Reinforcement Operations
- Civic Actions
- Deception Operations
- Fire Support Control
- Counterintelligence (CI) Operations
- Initial Terminal Guidance
- Electronic Warfare
- Military Operations in Urban Terrain (MOUT)
- Clandestine Recovery Operations
- Tactical Recovery of Aircraft and Personnel (TRAP)
- In-Extremis Hostage Rescue

The rapid response planning sequence is depicted in more detail in the Appendix. It is based on time-tested command and staff action steps taught for years at Quantico and Newport, it has been modified to be incorporated as a C^4I^2 tool for MEU(SOC)s to meet a six-hour crisis response time. Rapid response planning for these LIC missions relies on standardized briefings, formats and uniform means for disseminating and displaying information/intelligence to ensure the MEU and PHIBRON are properly briefed. Since MEU(SOC)s must be prepared to deal with several missions simultaneously, the MEU and PHIBRON rely on detailed comprehensive Standard Operating Procedures (SOPs). These contain the various "packages" of requirements for each type of mission. The primary function of SOPs is to eliminate lengthy operations orders by allowing "planning by exception." The

objectives of the process are to enhance speed and decisiveness. "Planning by exception" facilitates this because prior to receipt of the mission each commander and staff member knows exactly what his role is in the planning and preparation process. (Brinkley and Rakow, 1989, pp. 18-21)

Intelligence requirements are generically listed for likely scenarios so that collection can begin prior to and continue throughout the deployment. To quote two Marines who have worked this aspect of C^4I^2: "We will never be as prepared or as ready as we want to be; neither will the enemy. The rapid response planning (and preparation) process gives us the edge. The product is a PHIBRON-MEU(SOC) team with a thorough understanding of its capabilities, a validated set of national plans, and a high level of training and readiness." (Brinkley and Rakow, 1989, p. 21) The closely integrated working relationship of the Marines and Navy is reflected by calling this progression the ARG/MEU(SOC) training and certification process. (Magee and Wilson, 1990, p. 16)

The thesis so far has established the most prevalent operational context within which the Marine Corps fights. This "paradigm of warfare" is based on the experience of threat, missions, and task organization. There are baseline intelligence requirements. Why does the Marine Corps continue to have the same problems of intelligence support to the ARG/MEU(SOC) conducting peacekeeping and peacetime contingency operations? Further insight into the recurring problems of intelligence support is achieved by analyzing the most prevalent mission a MEU(SOC) has done, a NEO, to illustrate special operations in low-intensity conflict.

D. INTELLIGENCE REQUIREMENTS FOR SO/LIC

The noncombatant evacuation operation (NEO) exemplifies the peculiar intelligence requirements that must be met in a special operations/low-intensity conflict environment. The success of such high-risk, high-stakes, politically sensitive operations can hinge on the accuracy and timeliness of intelligence. The U.S. Government reserves the right to protect its citizens and property in foreign soil. The enemy may not be a politically-organized entity, but an ambiguous system or environment in which, for a number of reasons, U.S. citizens live.

Noncombatant evacuation operations are conducted for the purpose of evacuating these civilians from locations in a foreign country faced with the threat, or fact, of hostile actions. A NEO operation is an unconventional mission with numerous unusual essential elements of information (EEIs). These EEIs have special considerations for collection and production, depending, generally, on whether the NEO is to be conducted permissively or nonpermissively.

Permissive NEOs require little displacement of combat forces ashore and are usually done with the host nation's concurrence and possibly support. Therefore, the chore for the ARG/MEU becomes mostly logistical in nature, a problem of moving noncombatants by a variety of vehicles to a variety of locations.

Nonpermissive environments, with a threat to the evacuation operation, require combat forces ashore. These threats can range from civil disorders and terrorist actions to full scale combat operations. Nonpermissive means the host nation government may not support the evacuation and the MEU

may be required to conduct a forced entry using combat power projection. Combat forces may be required to establish defensive perimeters around evacuation sites, escort convoys of evacuees, participate in recovery operations of evacuees, and screen them prior to evacuation. Many of these tasks are normally the responsibility of the Department of State officials.

The tasking of a NEO happens in a time-compressed and evolving crisis environment. Figure 4 shows the typical organizational structure that conducts the NEO in WestPac. (USMC, Landing Force Training Command, Pacific, 1989, p. 1-6) This unique tasking and command and control structure reveals the NEO to differ from normal military operations in several critical respects. The initiation of a NEO is a closely held political decision starting with the Ambassador; hence, early liaison with the Defense Attache Office could provide a great deal of vital information about the background, current situation, and prospects for the CATF and CLF directed to conduct the operation. The NEO evolves quite rapidly into a military mission once the ambassador's request is approved by the President. This causes a strict sensitivity to the timing of execution of the military phase. Coordinating directly with the State Department officials is a key necessity. These officials control the timing of mission execution and often impose restrictive ROE which preclude critical planning functions (e.g. conducting site surveys of helicopter landing zones, evacuation points, etc.). (USMC, Landing Force Training Command, Pacific, 1989, p. 1-2)

The characteristics of NEOs can be summarized as: uncertainty in planning; limited military objectives; and the ultimate care of civilians and

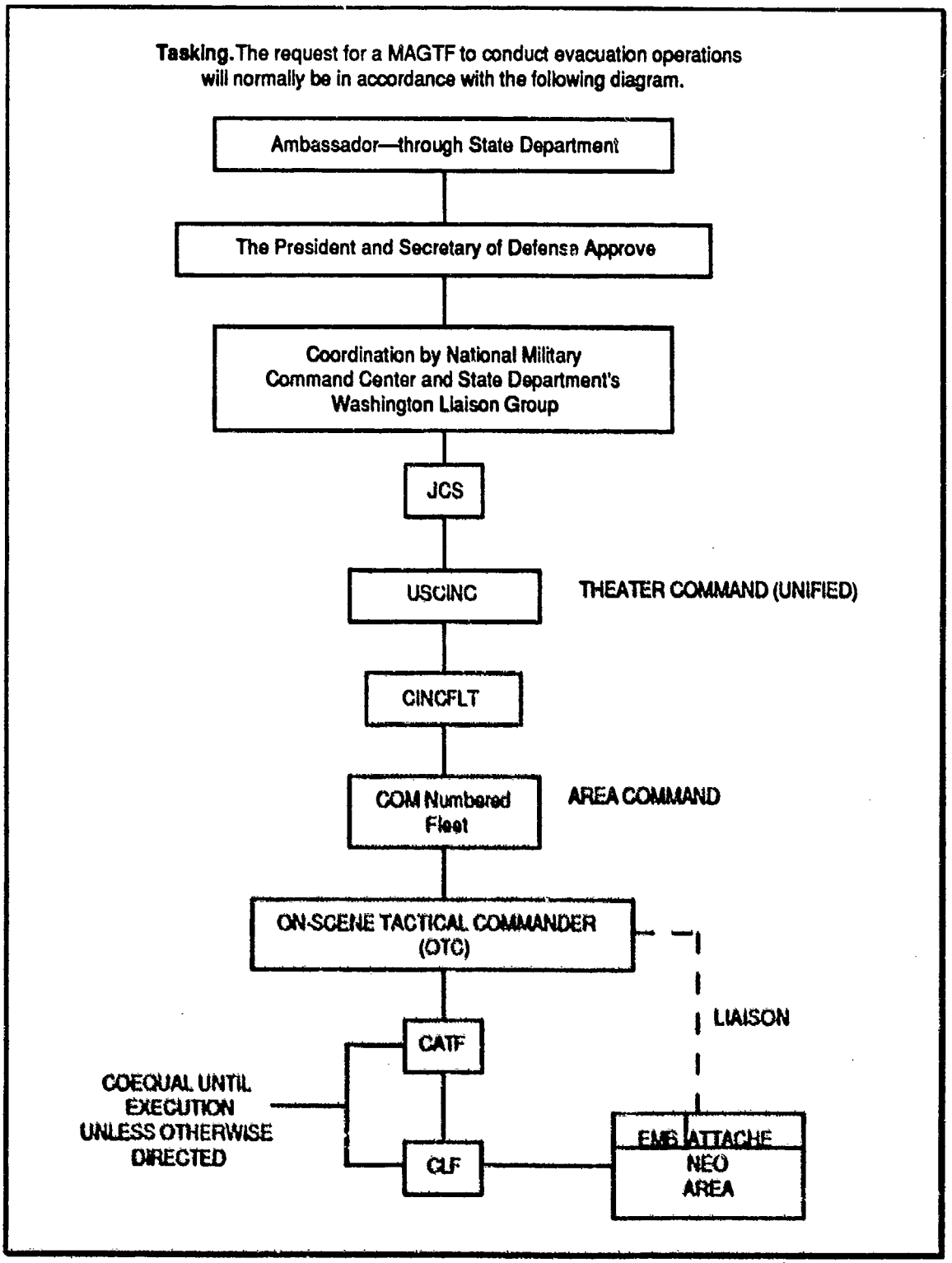


Figure 4. NEO Organization Structure

maintenance of order. *Uncertainty in the planning phase* and throughout the operation is the greatest obstacle to overcome operationally and is where intelligence problems are compounded. The timing of the evacuation is not a military decision as much as it is a function of an ambiguous threat and the political impact of withdrawing U.S. personnel. The location(s) where combat forces will be positioned also is politically sensitive; although evacuations usually take place near the capital, large cities, or military bases, preplanned sites may not be available. The actual size of the landing force may not be determined until the "llth hour," so the forces committed to the operation and the forces actually employed will vary according to State Department arrangements. The means of insertion of the landing force and extraction of noncombatants and landing force will depend on—among other things—vehicle availability and weather. The number of noncombatant evacuees requires the earliest planning and depends on Embassy personnel to coordinate. The presence and disposition of a hostile force may not be known nor can the reaction of the host country always be foreseen. The duration of the execution phase of the operation depends on the type and number of lift vehicles, number of evacuees, size of the landing force, geography, and the hostile threat. Secondly, it is *military objectives* which dictate most military operations. However, in a NEO these are very constricted by time and restrictive ROE. Thirdly, information will be required on the do's and don'ts of *civilian care and maintenance of order.* Items such as medical care and personal necessities must be preplanned ashore and afloat. (USMC, Landing Force Training Command, Pacific, 1989, p. 1-6,7)

The intelligence requirements for noncombatant operations are, thus, unusual. They are intimately connected to the "rapid planning process"; they demand extremely detailed information; and commonly they require special products for particular consumers. Dissemination of intelligence must be timely, accurate and the result of a fusion of all sources available to cull only the most pertinent of available information. The following considerations apply:

- Considerable organic and external collection and analytical resources will be dedicated to a relatively small force and objective area;
- Support to the rapid planning process demands a rapid information turnaround;
- Work done prior to receiving an execution order must anticipate the intelligence requirements to save valuable time. The use of generic intelligence requirements expedites promulgation of needs;
- There is great emphasis on graphical displays of intelligence on the NEO target area. These include terrain models, building diagrams, and gridded photos. Such graphics increase the consumer's understanding and speed up the planning process while improving detailed comprehension by the operating forces;
- Intelligence personnel from the MEU, SRIG, Navy, or possibly theater and national levels must be organized into detachments and assigned to the advance party and any other units going ashore apart from the main command cells. Their mission is to collect for higher command and provide tailored support to the unit to which they are attached;
- It is the immediate, continuous, and close cooperation with other military services and government agencies in theater which will greatly contribute to the intelligence effort of the MEU Intelligence Officer. Early, direct liaison authorization to the attache is vital; and
- The basic ability to communicate with evacuees and local officials must be obtained rapidly by the operating forces.

The determination of intelligence requirements is the initial step in the direction of intelligence collection. A full understanding of the national and

theater intelligence assets and capabilities is required of every ARG/MEU intelligence section. The following is a basic list of systems and products for IMINT, SIGINT and HUMINT exploitation for the ARG/MEU(SOC) conducting a NEO. (*MAGTF Intelligence Operations (FMFM 3-21)*, 1990, p. 13-10)

Imagery resources include:

- Special Activities Office (SAO) Package;
- If a Carrier Battle Group (CVBG) is near, F-14 with Tactical Aerial Reconnaissance Pod System (TARPS);
- Imagery support from theater intelligence centers like the Joint Intelligence Center, Pacific (JICPAC) and Atlantic Intelligence Command (AIC) via the Fleet Imagery Support Terminal (FIST);
- Naval Intelligence Processing System (NIPS) data base provides textual only information; an upgrade to NIPS is the Naval Warfare Tactical Database (NWTDB) which integrates other DoD textual databases; and
- Handheld imagery provided by Department of State, military attaches, advance party, or possibly helicopter overflights, if permitted. (USMC, Landing Force Training Command, Pacific, 1989, p. 1-16)

SIGINT resources include:

- National assets from National Security Agency (NSA) or theater assets from FOSIFs (preferably direct);
- There is a greater SIGINT capability associated with a CVBG than an ARG if it is in the vicinity;
- The MEU has an organic Radio Battalion detachment for limited tactical EW support; and
- Ultimately communications intelligence obtained by the advance party, the Embassy and a friendly host country could provide some of the more timely and reliable SIGINT. (USMC, Landing Force Training Command, Pacific, 1989, p. 1-16)

HUMINT resources include:

- Counterintelligence representatives will be attached to the MEU and provide the connectivity for HUMINT directly from the Embassy or

> evacuation site(s). National level HUMINT support tends not to be as time sensitive as a crisis response requires unless a CIA JILE team/system or other service HUMINT support team is brought aboard the command ship. (USMC, Landing Force Training Command, Pacific, 1989, p. 1-16)

Unfortunately, there is limited organic intelligence support to the ARG/MEU; other theater, service, and national assets are required to do the job well. And, as Brigadier General Paul K. Van Riper stated after observing Marine Corps intelligence support in DESERT STORM: "If we don't own the system, we will stand in line to get our fair share of the product." (Van Riper, 1991, p. 1)

VI. ORGANIZING FOR INTELLIGENCE

A dilemma arises whenever an ARG/MEU gets mobilized for an operation. On the one hand, the commanders' decision-making and staff actions must be streamlined and resources must be allocated efficiently to the units to be committed. Operational efficiency is all-important; otherwise, resources are squandered and the tactical force may be defeated. The dilemma for the intelligence structure is the need for streamlined actions balanced against the need for exact, detailed intelligence. The intelligence *product* is the focus of all effort. Each commander must appreciate that the structure he utilizes will reflect various kinds of trade-offs; the commander's responsibility lies in defining his mission's intelligence requirements so that the intelligence structure will be optimized for his mission.

The overall integrated intelligence effort is planned and coordinated under the MEU and ARG commanders' instructions by the MEU S-2 and ARG (PHIBRON) N-2. The production of intelligence, from the determination of IRs and essential elements of information (EEIs) to the final dissemination of intelligence, must be carefully orchestrated to ensure the timely, accurate, and detailed intelligence required by the commander. The planning and coordination of the integrated intelligence effort requires early identification of IRs, timely collection planning, analytical effort to produce intelligence, and dissemination early enough to be of use to the command. The ARG/MEU N-2/S-2 must have their organic intelligence sections augmented to accomplish many of these tasks. (*MAGTF Intelligence Operations (FMFM 3-21)*, 1990, p. 7-11)

In virtually every intelligence after-action report, the amphibious task force commander and the landing force commander have expressed concern regarding the lack of direct, tactically tailored, near-real-time operational intelligence support for the Naval/Marine Corps power projection missions. The infrastructures of the operational intelligence architecture seem to have been the source of the problems.

Many times dissemination of a product did not occur because of a lack of understanding of the various commands, operating levels, and intelligence staffs. Technological shortfalls were less a problem than convoluted organizational and procedural situations. In response to intelligence shortfalls which had been encountered through 1987, the Marine Corps carried its C^4I^2 initiatives into the Fleet Marine Force. All FMF intelligence assets were organized into Surveillance, Reconnaissance, Intelligence Groups (SRIGs). In addition to consolidating each MEF's intelligence collection, production, and dissemination capabilities, the SRIG incorporated other unique units that had dissemination, deception, and maritime direct action capabilities. (Ryan, 1990, p. 60)

A. SURVEILLANCE, RECONNAISSANCE, INTELLIGENCE GROUP (SRIG)

The reason for creating the SRIG was to give every MAGTF the capability to conduct time/target sensitive operations using specially trained, self-sufficient, sea-based Marines; all MAGTFs were to be special operations capable (Wilson, 1988, p.68). So, driven by its experiences in LIC, the Marine Corps is tailoring a warfighting "umbrella concept." The procedural aspects of this new concept come from SOC and maneuver warfare doctrines; the organizational aspects of it are MAGTF, C^4I^2, and SRIG concepts.

According to the SRIG doctrinal manual, *FMFM 3-22* (Coordinating Draft of October 1990), the mission of the SRIG is to provide surveillance, reconnaissance, intelligence, counterintelligence, electronic warfare, air and naval gunfire liaison, tactical deception, maritime direct action and secure communications to MAGTFs. Conceptually, the SRIG is to bring the function of "unity of effort" and C^4I^2 to the commander and the MAGTF operation. It accomplishes this by assigning an officer-in-charge (OIC) to a flexibly task-organized detachment, as appropriate to the mission and size MAGTF. The SRIG Det is expected to be capable of conducting multi-source information-gathering missions using organic assets, and to provide the tactical commander with near-real-time, all-source intelligence during all phases of all operations. (*SRIG, FMFM* 3-22, 1990, p. 1-5) Since perfect battlefield intelligence is impossible, and collection and analytic assets are limited, only a fraction of the information theoretically available is going to become intelligence. The MAGTF intelligence officer and SRIG Det OIC must ensure that the commander is getting that fraction of the information he deems essential. (*SRIG, FMFM* 3-22, 1990, p. 2-4)

There are three SRIGs in the Marine Corps. In October 1988, 2nd SRIG stood up in II MEF, Camp Lejeune. In October 1989, 1st SRIG stood up in I MEF, Camp Pendleton. And in October 1990, 3rd SRIG began consolidating in Okinawa. Figure 5 is a depiction of a typical MEF SRIG. It is led by a colonel and consists, at full strength, of approximately 2,400 Marines.

Ideally, the smaller MEU SRIG Det consists of:

- 1 OIC and 2 enlisted as a Headquarters Det;
- 4 enlisted Interrogation Platoon (IP) Marines;

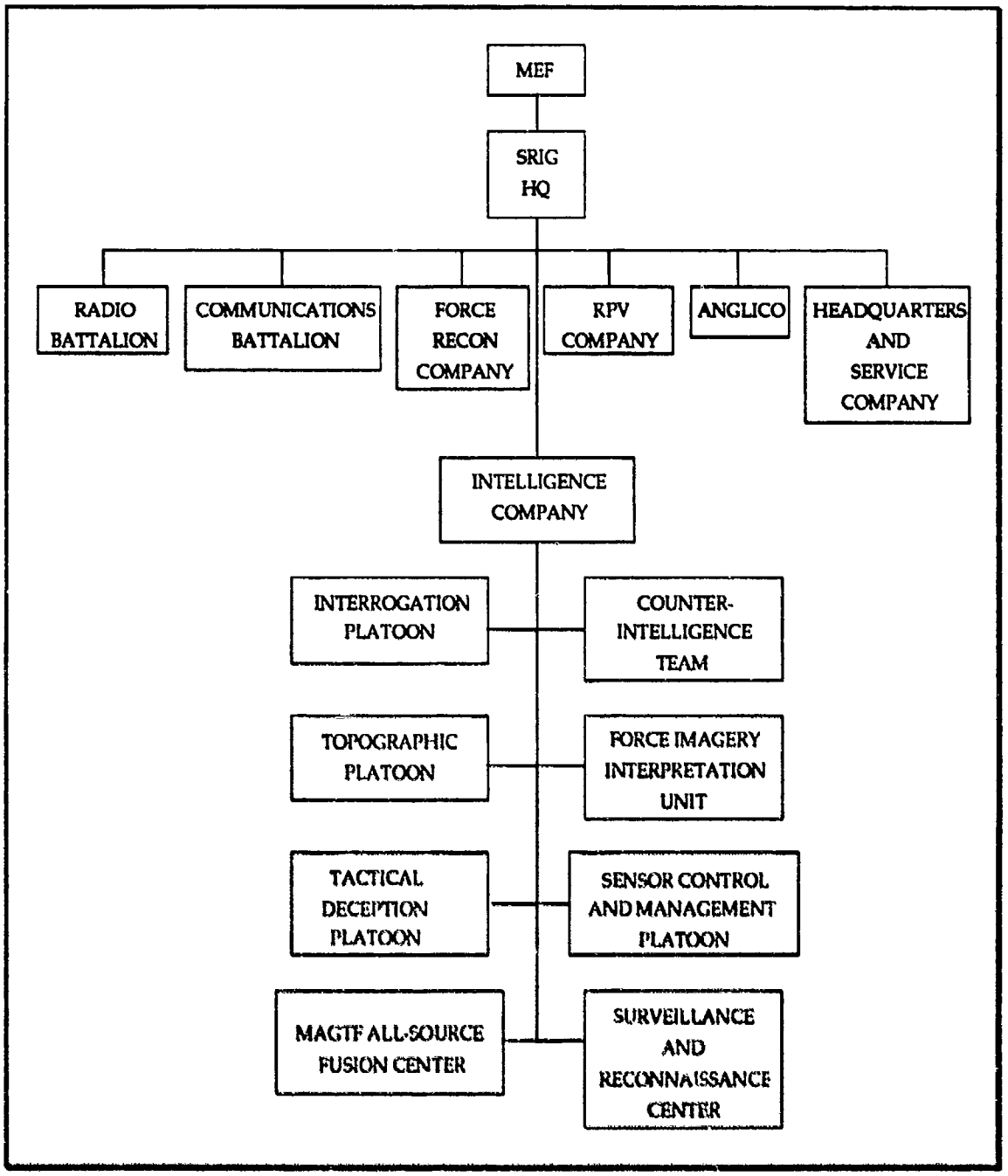


Figure 5. Current SRIG Structure

- 1 officer and 2 enlisted Counterintelligence Team (CIT) Marines;
- 2 enlisted imagery interpreters from the Force Imagery Interpretation Unit (FIIU);

- 2 enlisted Marines from Topographic Platoon;
- 1 officer and 3 enlisted MAGTF All-source Fusion Center (MAFC) Marines;
- 1 officer and 3 enlisted from the Tactical Deception Platoon (Tac-D);
- 2 officers and 11 enlisted Marines of Air-Naval Gunfire Liaison Company (ANGLICO);
- 2 officers and 26 enlisted from Radio Battalion (RADBN);
- 14 enlisted from Communications Battalion;
- 2 officers and 16 enlisted from Force Reconnaissance Company;
- 1 officer and 8 enlisted from Remote Piloted Vehicle (RPV) Company; (*SRIG, FMFM* 3-22, 1990, pp. 3-34,35)

The MEU SRIG detachment brings a total of 11 officers and 97 enlisted to assist the MEU commander in the C^4I^2 aspects of communications, intelligence, maritime direct action, and fire support coordination. The Surveillance and Reconnaissance Center (SARC) is manned by double-hatting various SRIG personnel. The following is a short summary of the intelligence assets in the SRIG Det.

The IP Det is to plan for and collect HUMINT from prisoners, detainees, and captured documents. CIT's mission is to collect information regarding the threats of espionage, sabotage, subversion, and terrorism. It also conducts special HUMINT operations for the MEU. The characteristics of an objective area determine the character and extent of CI operations. The density of the population, its cultural level, the attitude of the people and political groups toward friendly and enemy forces and the stability of the local governments are all factors in determining the numbers of CITs needed for the mission. (*SRIG, FMFM* 3-22, 1990, p. 9-27) FIIU provides imagery interpretation to support operations. TOPO is to provide tailored mapping, charting, and

geodetic (MC&G) and terrain analysis products. (*Tri-MEF Field Intelligence SOP, FMFRP 3-28*, 1989, p. 3-4)

The MAFC Det is responsible for providing the personnel, intelligence databases, and equipment to assist the MEU S-2 in conducting analysis, production, collection management, and target intelligence. The SARC is to direct, coordinate, and monitor intelligence collection operations conducted by organic assets. (*Tri-MEF Field Intelligence SOP*, 1989, p. 3-3) It should be noted that there are ongoing discrepancies in the doctrinal sources on SRIG support to the MEU. In actuality, a MAFC and SARC will not join a MEU unless it requires extensive intelligence augmentation (*SRIG, FMFM 3-22*, 1990, p. 9-47).

The RADBN Det has the mission to conduct tactical SIGINT, ground EW operations, and communications security (COMSEC) monitoring and analysis. The Force Recon Det has the intelligence missions of conducting pre-assault and deep post-assault ground reconnaissance and surveillance operations. It also is specially trained to conduct direct action missions such as in-extremis rescue at night from sea at significant distances. (*Tri-MEF Field Intelligence SOP, FMFRP 3-28*, 1989, p. 3-3)

The RPV Det uses the Pioneer system and is the only aerial reconnaissance capability in the MEU. Most MEUs actually do not take any RPVs with them because there are not enough airframes in the inventory and the capability to launch and recover from amphibious shipping is not fully established in the Navy and Marine Corps. Only two RPVs are to be purchased in 1991 and 1992. The RPV or follow-on unmanned aerial vehicle (UAV) system is critical to any MAGTF for providing real-time target

acquisition, battlefield surveillance, reconnaissance, and radio relay support. (*Concepts and Issues*, 1989, p. 3-5)

This thesis cannot examine all the organizations, procedures, and technologies which were in place during recent conflicts. A useful analytic distinction is intelligence support from national to theater and from theater to tactical. In order to achieve greater insight about the problem of intelligence architecture for the Navy/Marine Corps team, the thesis examines the current intelligence apparatus in place for a typical ARG/MEU(SOC) force from the perspective of FMFPAC. In a peacetime contingency environment the emphasis is on getting the right amount and type of intelligence support forward to the deployed ARG/MEU using an operationally-oriented C^4I^2 architecture.

B. INTELLIGENCE ARCHITECTURE FOR OPERATIONS AFLOAT

When in the Western Pacific (WestPac), the afloat MEU is under operational control (OPCON) of CG III MEF until receipt of operational mission orders. The ARG is under OPCON Third Fleet while in the Eastern Pacific (EastPac) waters, and OPCON to Seventh Fleet while in WestPac. Upon receipt of an operational mission, the ARG is designated the amphibious task force (ATF) and remains subordinate to the Seventh Fleet. The MEU is designated LF and is subordinated to Commander, ATF and the numbered Fleet. When employed ashore, the MEU will normally remain under OPCON of the Commander, ATF, unless directed by USCINCPAC to operate under its control or under control of a JTF. (*Fleet Marine Force, Pacific (FMFPAC), Intelligence Sub-Architecture*, 1990, p. 2-16).

Shipboard C^4I^2 is designed to serve the Commodore of the ARG (captain) and the Commander of the MEU (colonel). When the ARG/MEU receives its mission these officers become Commander Amphibious Task Force (CATF) and Commander Amphibious Task Force (CATF) respectively. These commanders' normal battle stations are usually on the command ship (LHA, LHD, LCC) in the Tactical Flag Command Center/Flag Plot (TFCC/FP) and the Landing Force Operations Center (LFOC).

The mission of the TFCC/FP is to monitor and control the assault phase of an amphibious landing. The TFCC/FP provides the CATF with integrated systems for collecting, displaying, evaluating, and disseminating tactical and command information for effective employment of his forces. The TFCC/FP enables coordination with higher commands such as the Joint Task Force (JTF) Commander and/or Fleet Commander, Theater CinC, National Military Command Center, and the National Command Authority. It also communicates with any Carrier Battle Group, Surface Action Group, and individual ships of the ATF. (Marine Corps Research, Development, and Acquisition Command [MCRDAC], 1990, sect. 42)

The communications connectivity is provided to higher commands using the ship's general service (GENSER) Communications Center (SCC) for secure worldwide GENSER voice and teletype (TTY); Ship's Signals Exploitation Space (SSES) for secure worldwide special intelligence communications (SPINTCOMM); and liaison teams from JTF, Theater CinC and/or national assets using secure portable satellite communications (SATCOMM) systems. Communications from ship to ship is GENSER voice and TTY. (MCRDAC, 1990, sect. 42)

A critical C^4I^2 tool used by the warfighting commanders aboard the command ship is the Joint Operational Tactical System (JOTS). JOTS is a prototype system that fundamentally uses increased computer software processing capabilities to rearrange and fuse various computerized shipboard command and control systems, satellite communications, and intelligence systems to provide a tactical surface surveillance picture to the commanders of the ATF. JOTS operates on the Navy's standard desk-top computer, the HP 9020A. The expansion capability of the HP 9020A ensures that any change to the JOTS can be handled without major hardware revisions. JOTS software utilizes a database management approach and can be adjusted to the needs of the CATF.

On the LHA the HP9020A is set up in a fiber optic local area network (LAN) that connects TFCC/FP, Navy Tactical Data System (NTDS) room, Combat Information Center (CIC), Supporting Arms Coordination Center (SACC), and Joint Intelligence Center (JIC). All the information that comes into these command and control nodes can be fully shared and/or tailored for pixel color computer terminal display. Additional display screens are located in the War Room (for CATF planning), LFOC, and Helicopter Direction Center (HDC). JOTS is essentially a local area network to display tactical friendly and enemy information from various operational and intelligence workstations and databases. The system is directly linked throughout the ATF and rest of the world by a satellite channel known as OTCIXS (officer in

tactical command information exchange system) which allows real time input. (International Research Institute [INRI], 1988, pp. 1-15)[3]

The LFOC is a shipboard command center for the CLF to command and control the operations of the landing force. Generally, the LFOC will use a combination of manual and automated systems such as manually plotted situation maps and voice/digital radio communications and computer information systems to display information and intelligence relating to the LF situation during the landing and subsequent operations ashore. The LFOC is not established ashore. The MEU Combat Operations Center (COC) assumes the functions of the LFOC and absorbs LFOC personnel and equipment during LF operations ashore. (MCRDAC, 1990, sect. 50)

The communications connectivity for the LFOC is GENSER-only and it establishes a number of LF GENSER voice and FAX radio nets. The LFOC and the TFCC/FP are linked with all warfighting centers on the command ship. If necessary, communications could terminate with Airborne Command, Control, and Communications (ABCCC) systems and/or an American Embassy in the TFCC/FP and LFOC. (MCRDAC, 1990, sect. 59)

The Ship's Signals Exploitation Space (SSES) is a designated, restricted access, shipboard space that provides the facilities, equipment, and personnel required to detect, classify, monitor, record, evaluate, and disseminate selected

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[3]The author spent one week on the *USS Peleliu* (LHA 5) out of Long Beach, California for research with PHIBRON 3 and 15th MEU(SOC) from 22 to 29 March, 1991. Additionally, the author toured the Naval Ocean Systems Center (NOSC) San Diego, California, for research on 8 May 1991. NOSC provides systems engineering, development, and integration of all command and control systems for afloat users.

foreign communications and non-communications information. The SSES provides Signals Intelligence (SIGINT), Cryptologic Electronic Warfare Suppo.t Measures (CESM), and special intelligence communications (SPINTCOMM) support to the CATF and CLF. The SSES provides early threat warning and rapid dissemination of other special intelligence indications and warning (I&W) information received through the activated Special Security Communications Center (SSCC) circuits maintained within the SSES. When the LF goes ashore, the SSES personnel must continue to support the ATF and MEU. (MCRDAC, 1990, sect. 46)

The Joint Intelligence Center (JIC) is the shipboard space that incorporates all intelligence personnel, materials, support functions, and intelligence systems of both the CATF and CLF to provide nearly all intelligence support to the ATF and LF. (There are limited organic intelligence assets on other ATF ships.) The effort is to reduce duplicative functions and produce more comprehensive and timely intelligence for all Navy and Marine forces. The JIC functions to: consolidate intelligence requirements for the ATF as a whole; prepare an integrated joint collection plan and/or worksheet; coordinate and process collection requests to higher and supporting activities; manage organic collection assets and activities; and collect and evaluate information to produce and disseminate intelligence for the planning and conduct of amphibious-based operations. (MCRDAC, 1990, sect. 43)

The CATF controls the JIC but it is normally shared by his N-2 (lieutenant commander) and the MEU S-2 (major) along with the ship's company intelligence officer (lieutenant commander). During landing force embarkation, personnel from the MEU intelligence section augmented by

required SRIG Detachment personnel will be incorporated into JIC watch sections in order to conduct sustained 24-hour intelligence operations. Total JIC manning is about 30 personnel including supervisors, intelligence analysts and clerks, and ADP operators. Basic facility support and the accessing and updating of prepositioned intelligence materials is provided by the ship's personnel. (Space and Naval Warfare Systems Command [SPAWAR-317], 1987, p. 3-48) All LF intelligence personnel become part of the COC when it is established ashore except for a few necessary LF intelligence personnel who continue to support the ATF/LF from the JIC. (MCRDAC, 1990, sect. 43)

The JIC coordinates with the JTF J-2, Theater Cinc J-2, Joint Intelligence Center Pacific (JICPAC) or AIC as appropriate, national intelligence agencies, and the American embassy if necessary. It also coordinates with assigned organic surveillance, reconnaissance, intelligence, and electronic warfare assets of the ATF and LF. (MCRDAC, 1990, sect. 43) Communications connectivity is the same as the TFCC/FP and LFOC combined, but an additional SATCOM net terminates in the JIC for receiving imagery transmitted to the Fleet Imagery Support Terminal (FIST).

The systems deployed by the JIC depend on the type of ship used. Generally, the JIC will have a combination of systems that will range from simple microfiche readers to portable and mainframe computer systems and special purpose terminal systems. The *USS Peleliu* (LHA 5) has the following systems supporting the JIC:

- **Naval Intelligence Processing System-Personal Computer (NIPS-PC).** NIPS-PC is a computerized disk database of naval and amphibious warfare intelligence information. It is a collection of selected data from

various DoD agencies and generally is composed of information about facilities, installations, and platforms, and the weapons and sensors aboard them whether on land or sea. NIPS operates at the GENSER secret level. The NIPS-PC database is textual data only and must be periodically updated by physically delivering diskettes and hardcopy reports to the ship. By 1992, a Mini-NIPS upgraded system is planned to incorporate graphics and real-time capability by receiving a direct broadcast from Naval Intelligence Automation Center. (Commander Naval Intelligence Command, 1990, pp.1-8)

- **Prototype Ocean Surveillance Terminal (POST) system.** POST is a special purpose terminal capable of processing, correlating, and geographically displaying non-organic multi-sensor air, surface, and land-based ELINT data and platform reports. Its primary tactical use is to provide C^3I support to power projection planning and operations. POST interfaces with the TADIXS-B/TRE Broadcast.

- **Tactical Data Information Exchange-Bravo/Tactical Receive Equipment (TADIXS B/TRE).** TRE is the shipboard system that is designed to provide highly accurate, near-real-time, electronic support measures (ESM) contact reports of the entire world. In general, ESM is the passive use of an enemy's electromagnetic emissions (communications, radar, etc.) for detection, identification, and location. A typical ESM contact report would consist of parameters like the signal characteristics (frequency, pulse repetition rate, etc.), type of emitter (air search, commercial navigation, etc.), time of interception, and bearing to, or location of, the contact. TRE receives worldwide electronic intelligence (ELINT) broadcasts over TADIXS-B, decrypts the data, and filters the reports to produce tactical displays as desired by the functional warfare area operators. So, a TRE display may only have airborne contacts or only shore-based contacts. (*MATT, ATRE Review*, 1989, pp. 1-2)

- **Fleet Imagery Support Terminal (FIST) system.** The FIST provides deployed forces with the capability to receive and transmit hardcopy and softcopy imagery. Softcopy imagery can be enhanced, manipulated, annotated, and stored. Hardcopy is provided by a digital printer which can produce prints on both paper and film. FIST requires a UHF/SATCOM channel which it usually shares with another net. Much has been written about the FIST; it is criticized for not providing targeting quality imagery and for taking too much time for each image transmission. However, FIST does show tactically significant changes at the target location.

Some optional systems that can be brought aboard ship to augment intelligence operations in the JIC are:

- **DIA National Military Intelligence Support Team (NMIST) system.** NMIST uses a Scalable Transportable Intelligence Communications System (STICS) to support secure intelligence communications requirements. The NMIST mission is to be a crisis intelligence "gap-filler" by responding to the tactical commander's IRs. It is expected to improve dissemination of national intelligence through DIA liaison. NMIST augments existing crisis support systems with text and imagery data. There are four deployable teams of three personnel, which were increased to seven teams during Operation DESERT STORM.[4]
- **CIA Joint Intelligence Liaison Element (JILE) system.** The Central Intelligence Agency also can provide its own personnel to support a Marine operation. There are three deployable JILE teams available for continency response, using a STICS to communicate with international CIA HUMINT, SIGINT, and IMINT assets
- **NSA Mobile Cryptologic Support Facility (MCSF) or SATCOM Tributary system.** The Tributary net uses STICS to provide the contingency force commander with direct access to NSA SIGINT products.

These shipboard systems are owned by or assigned to the Navy but must be understood by the Marines. The JIC will continue to support all Marine operations until the command element is well established ashore.

C. MEU INTELLIGENCE ARCHITECTURE FOR OPERATIONS ASHORE

The MEU intelligence section consists of: the S-2, a major; S-2 Assistant, a captain; the Intelligence Chief, a gunnery sergeant; and three intelligence analysts, two non-commissioned officers and one junior enlisted. This team

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[4]The author conducted a telephone interview with the head of NMIST Command Support Office (CS-1A), DIA, LTCOL Marshall, USAF, on 5 December, 1990.

will be required to conduct many overlapping and separate intelligence duties.

The mission of the MEU intelligence section is to meet the IRs of the MEU commander, staff, and other levels of command. Because of its limited size, the MEU normally concentrates its assets and attention on the enemy forces and activities that could affect the operation up to 96 hours in the future. (*MAGTF Intelligence Operations (FMFM 3-21)*, 1990, p. 7-12) Therefore, the MEU finds itself operating almost wholly at the tactical level of war; its needs are for *tactical* intelligence. Tactical intelligence is used for the battle in progress and is required for the planning and conduct of tactical operations. (*MAGTF Intelligence Operations (FMFM 3-21)*, 1990, p. 2-2)

The MEU's IRs are satisfied by exploiting all levels of intelligence in order to compose a tactically relevant picture of the battlefield area. All collection, analysis, and production are toward this end. The communications and computer systems of the intelligence architecture can make notable contributions to the production of tactically relevant intelligence. The primary areas for technological contribution are in recording of information, database management, information storage and retrieval, and comparison of informational elements during analysis. (*MAGTF Intelligence Operations (FMFM 3-21)*, 1990, p. 3-4)

The MEU intelligence section does not train to go ashore. The reason for this is that MEU(SOC) missions have tended to be of short duration, with a limited presence ashore, and command and control expected to remain afloat. However, if the MEU command element were to go ashore, the intelligence section would be responsible for establishing a MAGTF Combat Intelligence

Center (CIC). The CIC is a joint effort of combining the personnel assets of the MEU with selected personnel from the SRIG Det and possibly other intelligence augmentees or liaison personnel from other Marine or supporting commands as required. (MCRDAC, 1990, sect. 61)

The following is a list of functions which the ashore MEU CIC is expected to fulfill:

- Interface with national, theater, joint/combined, and organic MEU intelligence, surveillance, reconnaissance, electronic warfare, and counterintelligence activities supporting the MEU(SOC) operations. The most significant intelligence organizations to coordinate with are the Amphibious Task Force N-2, a possible Joint Task Force J-2, the theater CinC J-2, theater joint intelligence center, and national intelligence assets.
- Produce intelligence for the MEU and subordinate elements.
- Disseminate intelligence to the MEU commander, staff, and to senior, adjacent, subordinate, and other commands as directed.
- Establish and maintain intelligence liaison with appropriate higher, adjacent, and supporting commands and intelligence agencies.
- Perform MEU imagery and photo intelligence activities.
- Conduct MEU counterintelligence activities.
- Determine MEU requirements for maps, charts, graphic aids, and imagery products and supervise appropriate distribution.
- Conduct MEU special signal intelligence collection, processing, and communications activities.
- Arrange for and coordinate dissemination of weather data for the MEU.
- Produce and disseminate target intelligence and maintain liaison with the target information sections of various units.
- Prepare intelligence, special intelligence, and counterintelligence estimates, collection and planning schedules, orders, annexes, appendices, summaries, terrain and hydrographic studies, order of battle studies, etc..

- Maintain enemy situation maps and order of battle maps.
- Maintain reconnaissance, observation and surveillance plot, and status boards as necessary. (MCRDAC, 1990, sect. 61)

The MEU CIC will normally be required to operate in a designated Tactical-Sensitive Compartmented Information Facility (T-SCIF) within the MEU command post. Communications connectivity for the MEU S-2 ashore is limited to: tactical secure and non-secure wireline and telephone systems; Tactical GENSER Communications Center (TCC) for secure worldwide GENSER teletype communications; tactical Special Security Communications Center (SSCC) for worldwide SPINTCOMM; LF secure and non-secure radio communications circuits; and SATCOM systems used by organic assets and special attachments. (MCRDAC, 1990, sect. 61)

Some of the key radio nets to conduct MEU intelligence operations are:

- MAGTF Recon Net (HF/UHF SATCOM). Provides for coordination of reconnaissance effort within the LF; reconnaissance information collection by recon units could be transmitted directly to the LFOC or JIC;
- MAGTF Intel Net (HF/UHF SATCOM/VHF). Provides for rapid collection and dissemination of intelligence information between CLF and the major subordinate commands of the MEU;
- MAGTF Aerial Observation Net (UHF/VHF). Provides means of controlling aerial observation and for transmitting information. It may be used for adjusting supporting arms;
- NET 1 MAGTF Defense Special Security Communications System (DSSCS) entry. Provides MAGTF commander SCI teletypewriter (TTY) communications with external agencies via the DSSCS system;
- Net 2 MAGTF SPINTCOMM Net External (HF/VHF/SATCOM). Provides secure TTY channel for the passing of SCI information internally between CATF and CLF;
- Net 3 MAGTF CRITICOM Net (VHF/SATCOM). Provides CLF a channel to adjacent service cryptologic agencies or cryptologic support group;

- Theater Cryptologic Support Net. Provides channel for rapid exchange of cryptologic information with the cryptologic element of the JTF, ATF, adjacent units, and in-theater Cryptologic Support Groups (CSGs);
- Radio Battalion CRITICOM Net (HF/VHF/SATCOM). Provides CRITICOM facilities to RADBN elements physically removed from the command post in support of MEU units;
- Direct Support Unit (DSU) Collection Net (HF/VHF/UHF/SATCOM). Provides command, direction, and reporting communications between a RADBN Direct Support Unit (DSU) and deployed teams/sites;
- ECM Control Net (VHF). Provides direction and control of RADBN ECM assets;
- Direction Finding (DF) Report Net (VHF). Provides communications from DF outstations to DF control;
- Counterintelligence/HUMINT Coordination Net (VHF). Provides the means for effecting command, control, and coordination of CIT and IP operations and reporting;
- MAGTF Secondary Imagery Dissemination System (SIDS) Net (SATCOM). Provides an imagery receive and transmit capability for the CIC and the FIIU and is linked to the imagery transmission device. (*SRIG, FMFM* 3-22, pp. 3-37,38)

Activating any of these communications nets is a decision of the CLF, based on the IRs of the mission/situation.

Likewise, automated data processing equipment (ADP) and other technologies are becoming more available to the MEU commander. The primary systems employed by the ashore MEU CIC will be a combination of manual and automated systems. The following paragraphs describe some of the key systems to be used by the MEU CIC.

The AN/TYQ-19 Intelligence Analysis System (IAS) Block II Upgrade is a prototype system in response to the requirement to downsize the Intelligence Analysis Center (IAC). The IAS is part of the IAC, which comprises systems for secondary imagery processing and dissemination, signals intelligence,

Tactical Electronic Reconnaissance Processing and Evaluation System (TERPES), Navy, other service, theater, and national assets. The IAC's information database is currently comprised of the Naval Intelligence Processing System (NIPS) database. The Block II Upgrade will field LAN-based microcomputer systems at the MEU. The IAS is be fielded in 1991. (*Concepts and Issues, 1990*, p. 3-19)

The AN/UYK-85, Fleet Marine Force-End User Computer Equipment (FMF-EUCE) is a desk-top IBM-compatible, TEMPEST certified computer that will be the primary data entry device for all automated intelligence information systems (Kane & Morin, 1989, pp. 57-58). It weighs 35 pounds, is self-contained and has the ability to operate with electrical power from a tactical vehicle. (*Concepts and Issues, 1990*, p. 3-18)

The Navstar Global Positioning System (GPS) is a space-based radio navigation system that will provide precise user location, within 16 meters, anywhere on or near the earth. Signals are received from four satellites. The Marine Corps emphasis is on the development and procurement of the manpack/vehicular variant which will be used by all elements of Marines. (*Concepts and Issues, 1990*, p. 3-4)

The AN/PSC-2, Digital Communications Terminal (DCT) is a programmable, hand-held, input/output device that operates over tactical radio and wireline systems. The terminal enables the user to transmit, receive, and display preformatted and free-text messages and graphic data in short digital bursts which minimize detection risk by decreasing on-air transmission time. Its utility is with enhancing the speed and accuracy of ground recon reports. (*Concepts and Issues, 1990*, p. 3-8)

The Marine Corps is acquiring some limited secondary imagery equipment for softcopy dissemination. These are SIDS devices which are primarily prototype Northrup FISTs which have been patched together to form an intermediate solution to tactical imagery needs ashore.

SCAMP employs all-weather remote ground sensors called Tactical Remote Sensor System (TRSS). TRSS is smaller, lighter, and able to detect activity using seismic, magnetic, infrared, and imaging technologies. The current sensor equipment is obsolete and TRSS will not be fully available until 1992. (*Concepts and Issues, 1990*, p. 3-20) Therefore SCAMP is not deploying with the MEUs today.

The MEU intelligence section, SRIG Det, and CIC will be limited in providing independent intelligence support to the subordinate elements of the BLT, aviation squadron, and MEU Service Support Group. The movement of that support ashore is phased in various ways and times. Therefore, collection coverage and intelligence support must be achieved with supporting naval, theater, and national assets. The CATF will continue to provide intelligence support to the CLF throughout the operation, using assets from the ARG and shipboard connectivity to shore-based nodes.

There seems to be a tension in the Marine Corps about afloat and ashore intelligence operations. The MEUs train and rely more on afloat intelligence architecture support than any other MAGTF. Training and planning for war as it really is needs to fuse afloat and ashore intelligence and, to do that, must fuse the Navy and Marine Corps intelligence architecture concepts. Landing Forces must move from ship to shore with a compatible architecture of concepts, doctrine, organizations and technologies. Connectivity and

interoperability are more than a matter of hardware. They include warfighting doctrine and organizing as a team to address common threats.

The Marine Corps must circumvent the tension created by making two separate doctrines, one for ground warfare which competes with the Army, and another for power projection which competes with the Navy. There should be one doctrine which guides the Marine Corps' C^4I^2 process.

There must be a systematic approach toward meeting many of these basic and recurring IRs. The model of likely conflicts in the future is clear. Reorganization of intelligence alone is not the answer. What can the Marine Corps and its intelligence community do to obtain full intelligence support to likely mission requirements? It is too easy to blame some other "entity(ies)" for not supporting "us." The Marine Corps is responsible for articulating its IRs and integrating them with theater, service, and national IRs. The Corps must further develop its warfighting requirements to interoperate with those of theater and service commanders. To do this a long term solution to the Marine Corps' intelligence support problem is to solve the disjointed manner that intelligence fits into the dynamic "closed loop" process of command and control (C^2). The next chapter will integrate the Marine Corps' C^4I^2 process and intelligence factors with the MEU(SOC). The issue of connectivity will be addressed as the essence of the C^4I^2 process/system.

VII. C^4I^2: ARCHITECTURE FOR WARFARE

Superior technology, purposeful movement, the application of combat power at the proper time and place, initiative and the influence of commanders through their C^3I allow Marines to engage any enemy and win.

General A. M. Gray, Commandant, USMC
(*SIGNAL*, November, 1987)

Success in combat depends greatly on fused, tailored intelligence communicated securely and rapidly. As always, the MEU(SOC) must exploit all tactical/combat intelligence capabilities. Therefore, a tremendously flexible C^4I^2 architecture which functions as a process of organizations, doctrines, and technologies is required due to the expeditionary nature of the Marine Corps. The C^4I^2 mission is to be prepared, and then to enhance operational capabilities when directed to varied threats in new locations. (Breth, 1990, p. 44, 45) These requirements cause certain difficulties in command and control and intelligence connectivity which are further compounded due to the normal "fog of war."

The basic requirements of the Marine Corps C^4I^2 system are:

- Command structures integrated across several operating levels;
- Control process appropriate for the diverse forces involved;
- Communications fast and secure;
- Computers with their terminals, databases, information processors, and means of networking fully exploited and integrated;
- Intelligence accurate and useful; and
- Interoperability of Marine Corps systems, units or forces to provide services to and accept services from other U.S. and allied forces.

A. WARFIGHTING PHILOSOPHY

Vice Admiral Rufus L. Taylor, Director of Naval Intelligence, reportedly told Secretary of the Navy Paul H. Nitze:

> You'll just have to make the decision on your own because that's the last step in the intel process. You hear what all the intel people have to say and then you decide what it all means. Now, you are exercising the final command function in intelligence. ("An Oral History," 1990, p. 5)

The C^4I^2 architecture and within it the intelligence (sub)architecture's real purpose for existing is to assist the commander in *commanding*. As Taylor's counsel above indicates, intelligence is merely a support function for the commander. The Marine Corps has a relatively new doctrine entitled "maneuver warfare" which encompasses a warfighting philosophy to guide how commanders might think of warfare and command. Success in combat does not depend on the specific methods used, but rather in the mental approach of the commander. Maneuver warfare relies on a distinct philosophy of command and therefore C^4I^2 must incorporate it as an essential characteristic.

The Marine Corps' approach to codifying this doctrine is to ensure that it is consistently effective across the full spectrum of conflict and is not rigidly applied only to certain situations. Maneuver warfare, as it applies to the LIC environment, is a warfighting philosophy that adapts to fighting against an ambiguous foe on his home soil in an ad hoc, time-compressed operation. The objective is mission accomplishment, while taking minimal casualties, with limited external support.

> Maneuver warfare is a warfighting philosophy that seeks to shatter the enemy's cohesion through a series of rapid, violent, and unexpected

> actions which create a turbulent and rapidly deteriorating situation with which he cannot cope. (*Warfighting (FMFM 1)*, 1989, p. 59)

The first guiding principle in the Marine Corps' philosophy of command is "to generate the tempo of operations we desire and to best cope with the uncertainty, disorder, and fluidity of combat, *command must be decentralized*." (*Warfighting (FMFM 1)*, 1989, p. 62) This is implemented by training subordinate commanders to base their decisions on the commander's intentions. (The rapid planning process functions to do this.) The second principle, which helps connect the C^4I^2 process to the commander, is the philosophy that command must be based on initiative, imagination, and boldness rather than on communications and computer technology, and command and staff procedures (*Warfighting (FMFM 1)*, 1989, p. 62). The commander's intent should focus on critical enemy factors. An example of intent is the idea of eliminating the Viet Cong guerrillas' support base by pacifying the South Vietnamese villages, which was the basis for the generally successful but short-lived Combined Action Program (*Campaigning (FMFM 1-1)*, 1990, p. 39).

This suggests an absolutely revolutionary approach toward filling *some* of the gaps in command and control of operations. It is reminiscent of Napoleon's "directed telescope" concept of establishing a means of obtaining information not apparent or available through normal reporting structures. It cuts through the regular command hierarchy by using *mutual understanding* as a means toward "implicit" communication. While in no way a primary means of command and control, mutual understanding has an historically well-founded utility. The qualities of good judgment, instinct and intuition also modulate the demands on a command and control system.

What must always be remembered is that final fusion of warfighting information happens in the mind of the commander. Part of the intelligence problem is the inherent uncertainty and conflicting data in every actual operation. The lack of time for a rigorous intelligence assessment increases the ambiguity and drives the commander to affect the situation by his own actions, and initiative. By combining information—particularly intelligence information—with an understanding of his superior's intentions, the commander can sense problems, rapidly check strategies, bypass in-depth analysis, and exercise his own initiative to accomplish the mission. Commonly, this results only from a thorough knowledge of fundamental combat actions. Through familiarity with training and procedures, a type of coordinated autonomy is established. Should he be in doubt, a subordinate is expected to act as his commander would want him to act. When this mutual understanding has been developed, operations in any time-compressed environment are greatly facilitated by the lessened need for communication and detailed planning. Moreover, this fostering of initiative allows each commander to concentrate more of his attention on his own responsibilities, and less on communications with higher authority. (*Warfighting* (*FMFM 1*), 1989, p. 63)

Maneuver warfare demands a confidence among commanders and subordinates for unity of effort. This new philosophy of command is part of the Marine Corps' effort to refocus and reform itself in the 1990s to conduct warfighting in terms of quality, not quantity, of efforts. Maneuver warfare does this by emphasizing mission planning which is problem-oriented rather than process-oriented. This fits extremely well with the unstructured

environment of LIC and crisis response. Getting commanders to accept a similar approach to operations actually functions to help integrate command structures across various operating levels. Another key is flexible application of organizational, doctrinal, and technological architectures to accomplish the mission and adjust to ambiguous situations. This qualitative warfare requires precise and timely intelligence on the tactical, theater, and strategic levels. Maneuver warfare relies on individual initiative at all levels, rapid decision-making, and free-flowing action. It achieves success by destroying the enemy's ability to resist.

At the same time, the reason for creating a system and architecture of command, control, communications, computers, intelligence and interoperability is to increase combat power through the transfer and effective use of vast amounts of information. It must not be forgotten that intuition and commander's intent cannot fill all the information gaps. So a C^4I^2 architecture must provide the effective *controlling* process in the combat environment; it is essential to completing the mission.

B. ORGANIZING THE C^4I^2 CONCEPT

At the Headquarters, Marine Corps level, the C^4I^2 Department and concept was created to merge a wide array of departments, doctrines, and procurement initiatives in the Marine Corps. The old paradigm of warfare failed to integrate these separate functions efficiently. All of the DoD suffered from this type of disjointedness. A systematic approach was missing to effectively operate with mounting fiscal constraints, bureaucratic parochialism, and inherent institutional and organizational impediments. The greatest need was to meet the changing threat. As has been shown, the

seriousness of the interoperability problem in DoD has consistently been portrayed in lessons learned from contingency operations. The Iranian hostage rescue attempt, the Grenada invasion, and the raid on Libya all highlighted interoperability problems. *Communications* systems have historically been the chief impediment to operating with other services and unified/specified commands. (Breth and Phillips, 1988, p. 18). The technologies of *computer* hardware and software are being tasked to solve many of these problems. However, it is clear that organization and procedure are as important as technological answers to the connectivity problem. The Marine Corps is fitting itself to the new paradigm, with the goal of all levels of command being able to use timely all-source intelligence as the basis for decisions. (Breth and Phillips, 1988, p. 16) MAGTF organizational and maneuver warfare doctrine, encompassing the MEU(SOC) and SO/LIC doctrine, categorically recognizes that the flow of *intelligence* is one of the keys to successful maneuver warfare operations.

Along with this, the C^4I^2 Department is responsible for *interoperability* within the Marine Corps, with other services, and with allies. Figure 6 depicts this merger of the C^4 Systems Division and the Intelligence Division into a C^4I^2 organization at Headquarters Marine Corps. To fully integrate the functions of all and to ensure consistency, the Operational Intelligence and Interoperability Branch was created.

In the SO/LIC environment, the first MEU(SOC) will generally have a simple C^4I^2 infrastructure. This structure will need to respond rapidly to the threat, mission, and the political-military needs of the forces and interests

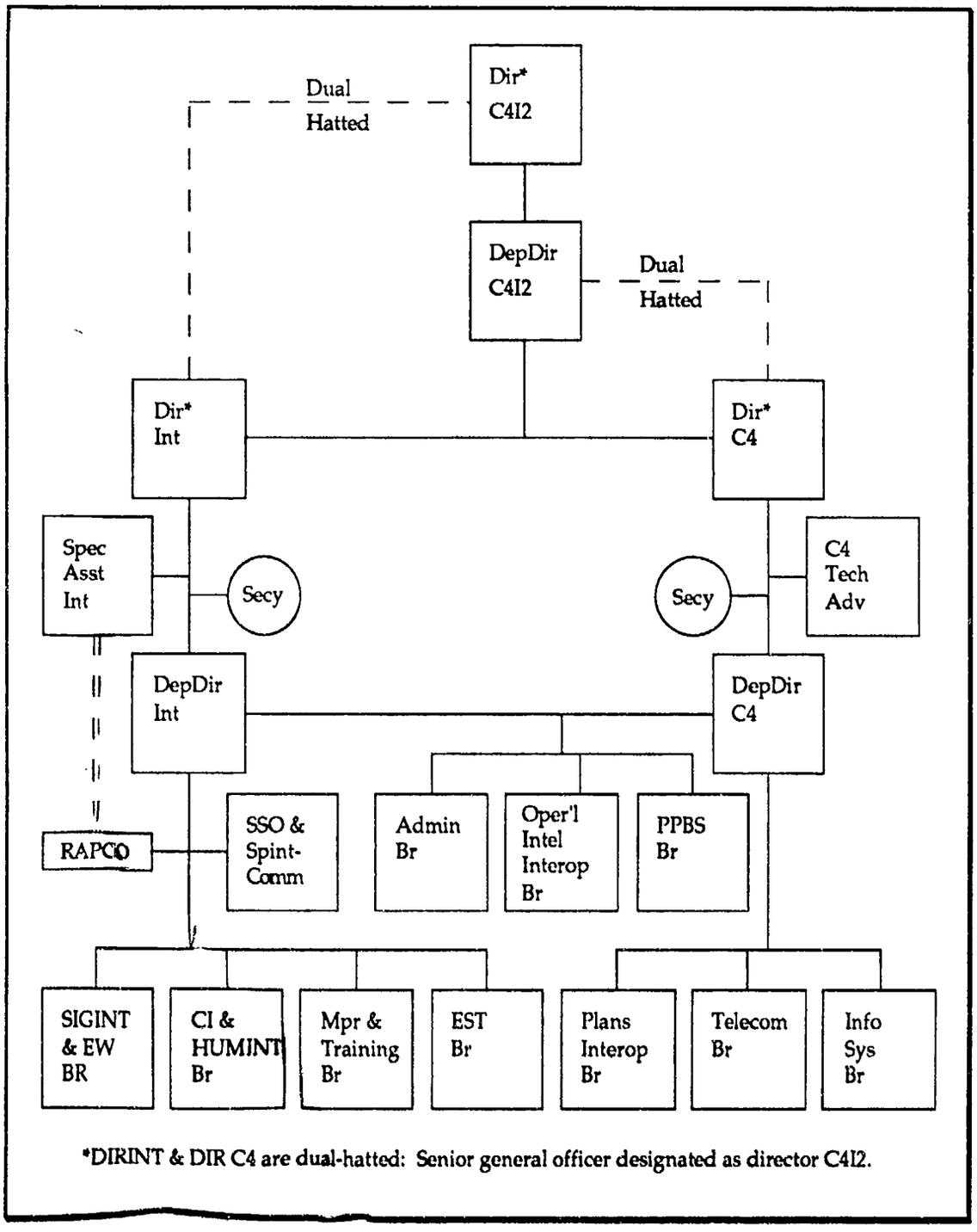

Figure 6. C4I2 Organization

being supplied. In Lebanon, 1982-84, for instance, 22 separate secure communications links had to be established [illegible] local

government, and multinational force liaison needs. This established new operational requirements for C^4I^2 organization, procedure and equipment. (Breth, 1990, p. 46)

C^4I^2 initiatives are mainly technical (i.e., lightweight tactical sensors, deployable data bases and fusion centers, and secure communications for both tactical and strategic reporting and dissemination). Care must be taken not to create a fascination with form. While the C^4I^2 concept could easily revolve around communications and computer technology, it is this technology which should revolve around the C^4I^2 process. The chief benefit of any architecture lies in the operational advantages it conveys; true proof of new military innovations lies in their enabling combat forces to effectively execute new tactics. (Breth, 1990, p. 48)

A difficulty in structuring a comprehensive C^4I^2 system which meets these flexible demands is that, due to the fluid, ambiguous environment in which MEU(SOC)s operate, the details tend to blur. Applying C^4I^2, and particularly intelligence, requires a high understanding of the principles of conventional methods; then warfighters can adapt the rules to fit the fluid LIC situations.

In small wars and contingency operations, it is the tactical perspective of commander's intent which must provide the unifying direction for all operations. Ways must be found to neutralize, seize, or destroy the most critical component of the enemy's power. Foremost, tactical intelligence on the environment and enemy has to be sought out. But as we have seen, operational intelligence also must provide information on the cultural, social, and economic aspects of the battlefield. Operational intelligence takes a

wider view of the conflict area and a longer view over time. Intelligence collection assets organic to the MAGTF are mostly tactical in scope. As a result, the MAGTF commander depends on intelligence support external to the MAGTF for sources of his operational intelligence. (*Campaigning (FMFM 1-1)*, 1990, p. 75) He needs to bring together information his own forces are collecting *and* the most complete information relevant to his operational needs which higher-level and adjacent organizations can provide. This requires "connectivity."

C. CONNECTIVITY OF INTELLIGENCE

The philosophy behind connectivity of intelligence information for tactical commanders contains three precepts: 1) The operating forces, whether a BLT, ACE or CSSE, do not care where the collection assets or intelligence fusion centers are, what organizational, communications and computer architectures and networks exist to support their warfighting mission, or what procedures are used in the intelligence process. While experience has tended to show that the desired place for a force intelligence officer is at the commander's elbow, whether the force's intelligence requirements are met by resources in the next room or hundreds of miles away is immaterial—so long as those requirements are satisfied in a timely manner. 2) The C^4I^2 network should be unobtrusive to the mission commanders of a MEU(SOC). Less visible system components are better. The real reason for the system is to receive, process, and disseminate intelligence information in support of combat planning and execution. The warfighters should be able to focus on the mission, not the components of communications, computers and intelligence. 3) It is the C^4I^2 network that must become heterogeneous

through connectivity of an integrated collection of organizations, doctrines, technologies, and command philosophy. Simply put, more effort should go to meeting operational and tactical intelligence requirements.

The information systems world calls this a "federated" approach which enables all components to function together effectively and invisibly, independent of the application functions of each (Senn, 1990, p. 506). So, connectivity is more than a communications problem or computer hardware/software problem. Connectivity of intelligence is essentially the unimpeded "whatever it takes" direction and flow of intelligence information; the right product at the right time provided to the operators. Therefore, besides connectivity within the electromagnetic spectrum, connectivity of intelligence involves unquantifiable factors, such as those found in human psychology. Flexibility in system design and use is the key to making connectivity both a means and an objective.

This chapter outlined the significant aspects of the Marine Corps' command and control architecture. The next chapter examines two current initiatives being sponsored by the U.S. Navy. The Marine Corps is in a position to influence these initiatives by articulating its own operational requirements clearly and continually through the developmental processes. The first initiative is a new conceptual architecture for naval C^3I, based on operational technology. The second initiative is a (sub)architecture called Intelligence Support to Strike and Amphibious Forces (ISS/AF). ISS/AF is an effort by the Navy to focus on the particular needs of its power projection forces. The Marine Corps would do well to integrate its own C^4I^2 and IAC systems into those of the Navy.

VIII. EXPANDING C^4I^2 FOR INTELLIGENCE SUPPORT MARINES CAN USE

...to move into the 21st century, we must solve two problems. The first is to develop new technologies to integrate sensors, facilitate tactical decision-making, and solve communications capacity problems. The second is to build and articulate a new architecture, organizational infrastructure, and doctrine to integrate both modern war at sea and crisis management.

VADM J.O. Tuttle, USN
Director, Space and Electronic Warfare
(Loescher, 1991, p. 86)

A. OPERATIONAL TECHNOLOGY

The Marine Corps has not fully integrated its concepts of C^2, though it is capturing that understanding in the formulation of C^4I^2. Call it what you will, C^2, C^3I, or C^4I^2, it should all be the same thing: a conceptual system of abstract and physical components that must interact with a purpose. It is a way of looking at warfare as an integration of components designed to assist the tactical commander in accomplishing his mission. An intelligence (sub)system or architecture should fit into the larger C^4I^2 construct. If Marines cannot envision themselves operating within such a warfighting system, then coordinating the Marine Corps for the next battle will be extremely difficult.

The Navy is beginning to implement changes to the way it conceptualizes command, control, communications, and intelligence (C^3I) for many of the same reasons the Marine Corps created C^4I^2. While the Marine Corps' traditional perspective has focused doctrine on a philosophy of warfare and

task organization of forces, it is less strong in developing technological aids. However, technology is the Navy's strong point, and its new C3I concept is based on "operational technology." The Navy is seeking to join all aspects of high technology to new command and control doctrine to serve operational commanders. The Navy considers this a shift in its traditional perspective from technology per se to operations, and calls it the "Copernicus Architecture." (Loescher, 1991, p. 86-88) The Marine Corps could benefit by encouraging and joining the Navy's efforts to streamline its C3I architecture. The time for integrating warfighting concepts has never been better.

The fundamental C3I problem of the Navy is that it has a proliferation of sensors, different report formats, organizational sponsors, complex programmatic agendas, and conflicting operational goals. Each shore-based and platform-based sensor, and each organization that sponsors it, has become an end to itself. Today there are too many formats for record messages, system-dedicated communications nets, proliferation of different hardware and software; and there is a tendency for the Navy to be locked technically and doctrinally on the Soviets as the threat. (Loescher, 1991, p. 88) Additionally, the operational command structure of the Navy has traditionally been from Fleet CinC to the ship. It has not indoctrinated itself that the naval power projection mission is "in progress" until its force elements are safely back on ship and the naval role in theater is complete.

C3I support to regional conflict or peacetime contingencies is quite different from that required for blue-water operations. Experience has shown that most contingency operations have had ad hoc connectivity and makeshift command centers. The intelligence doctrine and C3I support

infrastructure has not been responsive to the contingency intelligence requirements. The task is how to focus every available intelligence asset in the nation's inventory into a fused, timely, tactically useful product, and then get that product to the warfighters, whether Marines, sailors, or naval aviators. The technical answer lies in making all communications datastreams interchangeable across all frequencies (HF, UHF, SHF, and EHF). Each bandwidth must be capable of being loaded tactically. Another solution lies in changing the traditional IRs of the Navy to more realistic ones. Then, intelligence centers could fuse all collection assets above tactical and link a tailored product to the shooters. (Loescher, 1991, p. 89) Only when the tactical commander is the focus of intelligence support can intelligence be considered a force multiplier.

All services could gain from linking their concepts of C^3I. It could be said that intelligence support to joint operations will increasingly fall to naval-based intelligence organizations, because of their day-to-day focus on current operations. The Navy has dedicated operational intelligence organizations that historically have been "turned on" to provide crisis support. Captain E.D. Smith, USN, offers the example of the Joint Task Force Middle East (JTFME) that was heavily supported with prolonged near-real-time operational intelligence, drawing heavily on Fleet Ocean Surveillance Intelligence Facility (FOSIF) WestPac and Fleet Intelligence Center Pacific (FICPAC). (Smith, 1989, p. 2) Of course, Marines were an integral part of that naval force and part of FICPAC's Strike and Amphibious Warfare Intelligence Cell (SAWIC) and production departments.

The new Navy Copernicus Architecture proposes four significant changes in the Navy's grand concept of C^3I: construct a standardized, global, shore-based network called Global Information Exchange System (GLOBIXS); consolidate existing fleet command centers; construct and arrange tactical nets into a series called Tactical Data Exchange System (TADIXS) to consolidate non-organic sensor data from GLOBIXS with organic assets afloat; and, since the TFCC will be the tactical focal point, establish "value-added" criteria for each element of the system. Conceptually, this new architecture will revolve around operational warfighting requirements—rather than the warfighting capabilities revolving around disconnected communications and computer capabilities. (Loescher, 1990, pp. 89-93) Only then will the Navy have connectivity of ashore and afloat organizations. A connected architecture also allows simultaneous fusion ashore and afloat. Similar to the Marine Corps' concept of C^4I^2, an umbrella architecture will only be revolutionary if it fuses intelligence for the tactical user. To do that efficiently, the operational experts must devise the system to meet the requirements of decentralized users.

The operators in the Marine Corps must understand their own requirements for C^4I^2. The Corps must solve the "meta-issues" and make fixes therein. The context for this effort is clear—"war as it really is." If a unit is attacked by snipers, then it centralizes behind obstacles. If the unit is attacked by artillery, then it displaces and spreads out. If the unit is encountering landmines, then it moves in a column. One looks at the patterns of history and determines what the requirements are.

U.S. military operations in Lebanon, 1958, Dominican Republic, 1965, Lebanon, 1982-84, Grenada, 1983, and Liberia, 1990 provide a model of likely

future conflict and implications of intelligence support to those conflicts that deserves careful attention. The model is based on specific lessons learned; but such "lessons" should be considered tactics, not strategy. A strategy for the future development of Marine Corps intelligence can only be derived from examining and making explicit the recurring intelligence themes that appear to come from these operations and then develop an umbrella concept for addressing these themes in the future.

The following "themes" should be considered by the Marine Corps in merging its C^4I^2 architecture with the Navy's and other services':

- There is a blurring of service boundaries requiring Joint operations and interdependent SOPs;
- Combined forces are a new trend;
- A global perspective of LIC is being developed;
- Operations will be at a faster pace;
- Crisis response times will be short, so capabilities must increase;
- There is an increased complexity of management, leadership, and command;
- There will be a greater dependence on intelligence and other information;
- There will be a search for high-tech solutions;
- There is a search for changed human thinking to meet such an environment;
- There is a need for tactically relevant and unambiguous order of battle data;
- There is criticality of timely HUMINT and SIGINT and IMINT sources;
- Accurate and current maps and charts will be needed;
- Future operations will involve media reporting (e.g., CNN), which must be supported; and,
- Area expertise cannot continue to be ignored.

C^4I^2 is a conceptual system that involves physical systems operating in relation with each other. There will be a perpetual lack of connectivity of intelligence without such a general "systems view" of the problems. Yet, by thoughtfully and incrementally revising our organizations, doctrine, and technologies to fit the new paradigm, we can effectively bring Marine Corps intelligence into the 1990s.

The chief difficulty is that the method of defining meta-issues is constantly disconnected and frustrated by the details. Intelligence is part of the solution, but at times the architecture is more the problem. The significance of the intelligence architecture is that it generates greater problems. The warfighting architectures of the Navy, Marine Corps, Army, and Air Force must be joined. That is generally a function of DoD; however, today one could even add the Coast Guard, Drug Enforcement Agency (DEA), State Department and embassies, etc. Articulating the requirements of the most used Marine Corps unit, the ARG/MEU(SOC), is a good focal point for addressing the larger issues. The ARG/MEU(SOC) can also be the focal point for designing intelligence support technology that is compatible with Navy and Marine Corps needs. The Navy has unique managerial and technical, and more financial, resources to bring to bear on the problem. The Navy may view their sponsorship role as primarily power projection support, and the Marine Corps can utilize that support for its expeditionary forces. The effect will be the same: integrated operational architectures that satisfy shared military requirements. An example of how Navy and Marine Corps intelligence requirements can be integrated is the ISS/AF concept.

B. INTELLIGENCE SUPPORT TO FORWARD DEPLOYED FORCES

This thesis has defined the most likely threat environment in which Marines will find themselves: peacetime contingencies and peacekeeping operations. The Navy defines their threat environment as having four types: global, regional, contingency and limited objective warfare (CALOW), and special operations (counter-terrorism, counter-narcotics, etc.). This is a recent change that certainly impacts the Navy's Maritime Strategy concept. It represents the way the Navy/Marine Corps expect to fight the next war. Some of the C3I systems that represent this new way of fighting are: TFCC/FP, JOTS, POST, PC-NIPS, GPS, and ISS/AF. (Tuttle, J.O., 1990, p. 1)

The long term goal of the ISS/AF concept is to enhance afloat and ashore intelligence support nodes in meeting the IRs of power projection forces. Here, the Navy is seeking a technological solution to make all intelligence systems and communications interoperable. (Naval Intelligence Activity, 1991, p. 2) This melds well with the Navy's operational technology C3I concepts.

DoD has a key role in achieving this interoperability, for they must sponsor the standardization of intelligence communications systems, ADP data storage and transmission formats, and support joint service interoperable data exchange, storage and retrieval systems. The DoD, Copernicus, and ISS/AF all focus on integration of existing systems.

On a Navy/Marine Corps level, the primary need is for a joint program sponsor to guide ISS/AF support (CG FMFPAC message, 1990, para. 7. D). No ISS/AF program has been sanctioned by CNO and CMC. However, each has established independent programs which include USMC Intelligence

Analysis System (IAS) and CNO's ISS/AF Extended Intelligence Support Terminal (X-IST). Each has proposed operational requirements which seek to establish common requirements compatible with joint operations and to expedite, as well as coordinate, all future tactical user support. (CG FMFPAC message, 1990, para. 11)

A fundamental problem in receiving and disseminating intelligence is that the system is not streamlined to meet critical IRs. In the past decade there has been a growth of microcomputers and workstations; the sophistication of shore-based sensors has made global surveillance and electronic warfare a possibility. What has evolved is a procession of advanced technology prototypes that are intended to help operational commanders; in fact, the more little problems these individual systems temporarily fix, the more obvious it becomes that there are larger, deeper problems. The Marine Corps must decide the form and substance of its requirements, with grave attention to constantly recurring operational items that are translated into operational requirements for system development. The words "system" and "architecture" have different meanings to different people; "system (or architecture) development" should not imply that some single acquisition can solve all existing shortfalls. The C4I2 architecture should function to control the warfighting effort by integrating the various organizations, doctrines, and technologies with a focus on recurring primary IRs. A useful model for analyzing the shortfalls in the flow of intelligence is found in Figure 7, the "intelligence pipeline."

Intelligence to national and unified/specified headquarters comes from a plethora of national and theater sources. The problems at the national and

U&S levels are duplication of intelligence production and control and coordination of intelligence dissemination. Intelligence then flows to the component command CinCs or commanders of JTFs while in garrison. The MEFs are included here. There are good fixed communications sites at these locations, especially for DSNET 3 and STU III. However, there are gaps in having poor technological systems to download intelligence to the deployed MAGTF commanders. SCI and GENSER traffic compete for air time. The next lower level in the intelligence pipeline is the deployed CJTF or Battle Group commander. The best communications connectivity for these forces is on the flagships or at the deployed JTF headquarters. Their problems mostly involve the deconfliction of intelligence data in the JIC.

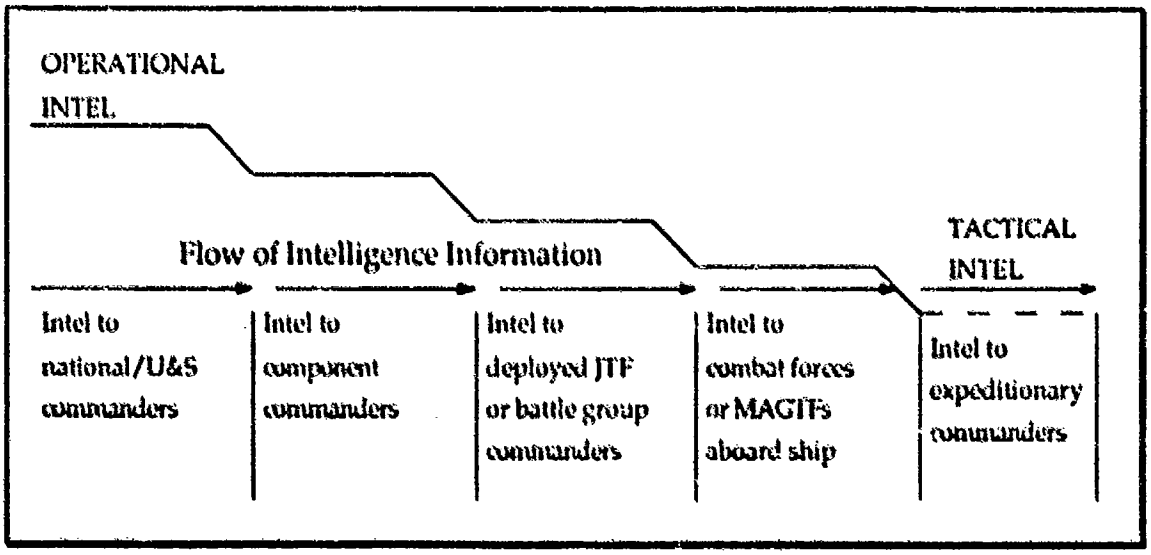

Figure 7. Intelligence Pipeline

This thesis suggests that the focus of intelligence support should be at the level of the pipeline where combat forces are deployed on shore in a combat environment or to naval strike and amphibious forces (power projection) aboard ship. There are severe FLTSATCOM constraints for these

commanders to deal with and a reliance on very extended communications networks. The focus of effort for providing intelligence support should be the expeditionary forces. That intelligence dissemination support will depend on the force's mobility. Expeditionary forces currently have a heavy reliance on in-country telephone systems and tactical satellites. All the tactical equipment must be extremely portable, reliable, and ruggedized. The expeditionary commander must rely on tactical radio links to most of his organic units. The dissemination problems create a lack of intelligence connectivity to the tactical commander, so the intelligence collected and produced at higher headquarters has few ways to get to the tactical commander except by hand-delivery or using the sparse communications capabilities of the tactical forces.

Power projection requires intelligence concerning a land-oriented environment, including coastal waters contiguous to that land, as well as the air spaces over each. Multi-source reporting of ground events needs to be cross-correlated with terrain and geographic data, then graphically displayed on maps and images to be more fully understood and analyzed. Ground intelligence is fused with information concerning weather, terrain, installations, orders-of-battle, characteristics and performance, geopolitical context, and enemy locations and intentions. Sources that need to be fused include IMINT, SIGINT, HUMINT, open sources, maps, and existing intelligence products. (BTG, 1990, p. 1)

All-source fusion of intelligence has been identified as a critical need for tactical operators. In fact, fusion for intelligence production should happen proportionally at every level of command. Each level of command must

identify what products they can produce for themselves and more importantly their subordinates. The idea of a pipeline also works for fusion centers that narrows to the needs of the tactical commander. In a small war/small unit environment it becomes obvious that without the "seductive" high technology, fusion must finally happen in the mind of the commander. The battlefield commander demanding current detailed information actually conducts the final fine-grained analysis tailored to his needs. This change in thinking requires guidance to come from the NCA (as recommended by the JCS) and the theater unified commanders because they are the warfighters on whose authority the MEU(SOC) will be operating. They will also provide the rationale for prioritization and authority for the production of intelligence. The ARG/MEU will articulate its IRs and the CinC must use those IRs to clearly define intelligence goals and priorities. The CinCs must also refocus their C^4I^2 to meet the needs of the warfighters.

The Navy and Marine Corps at the fleet and FMF levels are anxious to ensure connectivity with the Navy's concept of C3I and future evolutionary development compatible with the Navy's "Copernicus Architecture." At these sub-service levels in Norfolk, VA and Hawaii, there is a continuous push for the development of prototype efforts for intelligence support systems (e.g., power projection workstations, X-IST, TERPES, and IAS). At this level of command there is a focus to develop the infrastructure and connectivity to support: Crisis Support Cells, Maritime Operational Intelligence Cells (MOIC), JTFs for counter-narcotics, and mobile JTFs. The new joint intelligence centers, JICPAC and AIC, are driving for secure teleconferencing from Washington to units in WestPac and the Med. The

analyst teleconferencing from national to theater to tactical levels is envisioned for the near future. Until then, the immediate need is for improved information and dissemination management. This is done by simply ensuring correct and only essential addressees are on all messages to ensure efficient use of communications resources. (CG FMFLANT message, 1990)

There continues to be a strong requirement for a 24-hour all-source OpIntel capability dedicated to supporting strike and amphibious warfare. Great strides have been made to provide quality, timely intelligence to power projection commanders. These commanders report their continuous need for direct, tailored, near-real-time OpIntel. (CG FMFPAC message, 1990, para. 4.A)

What is lacking most is an integrated, automated ISS/AF capability with communications connectivity to any level of USN/USMC or JTF commander. Interservice and cross-theater dissemination is needed. The two Fleet Marine Force (FMF) commands, Pacific and Atlantic, both are urging the development of an effective telecommunications architecture as the most significant problem facing the implementation of an ISS/AF capability. ISS/AF telecommunications support requirements must emphasize the existing requirements for fast, secure, and reliable record and non-record telecommunications to receive and disseminate intelligence information in a variety of forms (voice, textual data, graphics, and imagery). These requirements for ISS/AF are also similar to the operational technology C3I problems. Additionally, the telecommunications support should be designed with the capability to expand to accommodate future requirements

(e.g., taped video, live video teleconferencing, etc.). Ashore units must be capable of functioning to support an air-lifted contingency force while en route to any objective area. (CG, FMFLANT message, 1990, para. e)

The systems architecture must have three tiers of hardware/software (workstations): shore-based nodes; afloat-based nodes embarked on strike and amphibious ships; and deployable ashore-nodes, which must be ruggedized, portable, have multi-level security, and be capable of transmitting and receiving from shore and afloat intelligence centers.

The primary operationally responsive ISS/AF fusion centers ashore need to be located at each MEF's MAFC and at the numbered fleet and theater JICs. They will provide time-sensitive I&W data and rapid responses to any intelligence query from deployed afloat or ashore commands. Each fusion center's watch officer will immediately cross-cue all available intelligence resources for enhanced analytical support or collection management. Deployable afloat and ashore intelligence architectures will simply be scaled down systems of the shore-based ones. There is no need for fusion centers at the FMF or fleet CinC level of command.

Currently, CINCPACFLT is providing collection management responsibilities for operational Navy and Marine commands. However, these functions could be absorbed by the numbered fleet headquarters, which would validate their requirements with a theater collection manager at JICPAC. FMFPAC has basically relinquished any collection management functions for Marine forces; as a result, the system seems to be more responsive to operational requirements. Essentially, FMFPAC has found that it is more useful in an administrative peacetime role than by mediating

operational control of any deployed forces. The idea of removing FMF and fleet CinCs from operational responsibilities is not new and needs to be researched further.[5]

It is then the operational components and theater intelligence fusion centers that must be able to telecast threat and intelligence updates to fleet and field commanders, providing textual and graphic information, and allowing immediate query and response to the tactical commander's IRs. This would be comprehensive intelligence support using such tools as automated "smart" workstations. The workstations could handle receipt of requests for information (RFIs) and/or CRITICs. These key operational support commands would be able to provide research, analysis, preparation, and transmission of tailored intelligence products. The smaller deployed afloat and ashore systems must possess communications and analysis capabilities which are ADP compatible with the larger nodes. (CG FMFPAC message, 1990, para. 4-6) ISS/AF is a good concept. Parochialism aside, it is configured to the needs of the most likely type of conflict of Navy/Marine Corps power

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[5]The author attended the annual Admiral Cooke Fleet CinC Planners Conference held at the Naval Postgraduate School in March 1991. The idea of the conference was to discuss the "need for a new focus for the new strategy" and provide an interchange of planners' ideas. A key point agreed on by all participants was that tomorrow's war will be fought by component commanders under a JTF. The functional service component commanders therefore will find themselves "getting out of the deliberate planning business" and no longer being warfighters. Theater CinCs are the highest and lowest level of operator between a JTF command and the NCA. Additionally, the Marine Corps has been examining how to reduce redundant headquarters. A good article is "Does the Marine Corps Still Need Separate Type Commands?" (Leonhardt, 1990, pp. 20-21)

projection forces and is capable of being tailored to the warfighting concepts of other services.

IX. THE FUTURE OF MARINE CORPS INTELLIGENCE

Marine Corps intelligence is at a crossroad. A principal concern is that the absence of intelligence guidance and priorities from the warfighting commanders and theater commanders will result in a continued diffusion of intelligence support efforts. Because U.S. intelligence is pushed to support a wide range of national defense problems does not mean that Marine Corps intelligence should be similarly widely focused. While the bulk of Marine Corps collection, analysis, and production systems and personnel continues to focus on the tactical problems across the spectrum of conflict, the latest doctrinal and organizational changes have been to operate in LIC. For the missions the Marine Corps has been involved in, intelligence support has not been very good. It appears extremely difficult to set realistic intelligence policy in the Marine Corps. The problem cannot be said to be that there are too many intelligence requirements to be met; rather, an insufficient commitment to concentrate on what is important. Perhaps intelligence officers have been reluctant to admit how little they really know, while commanders and their operations officers do not want to say how indefinite their own plans are. Having identified recurring themes of intelligence requirements based on real experiences of the Marines, and proposed changes within the Marine Corps intelligence community to meet these requirements, this thesis will conclude with suggestions to resolve some key intelligence problems.

The Marine Corps must have a tactical aerial imagery/reconnaissance capability for the MEU(SOC). The national systems support must be pursued vigorously, but the most responsive support is from organic systems. The answer lies in acquiring the latest unmanned aerial vehicle (UAV) systems

and installing them aboard various amphibious ships. The best technology and doctrine is spread among several UAVs already in service. Also, wet-film pod systems already exist for AV-8 Harriers (the British use one) and could even be put on helicopters; but acquisition and development projects were canceled with guidance to wait for the Advanced Tactical Reconnaissance System (ATARS) digital sensor suite in the mid-to-late 1990s. Unfortunately, this down-linked imagery capability is only planned for the F/A-18D aircraft, which will not help today's or tomorrow's ARG/MEU. (*Concepts and Issues*, 1990, p. 3-51)

SIGINT is an area in which the Marine Corps has done fairly well. Radio Battalion assets are being innovatively used. However, the LIC environment has ever-changing SIGINT targets and requires EW assets that can exploit non-military, low-technology communications as well as traditional HF and VHF systems.

Another issue that deserves closer analysis is the manner in which the Navy focuses nearly all of its tactical intelligence collection systems to support Carrier Battle Groups. There is a wealth of aerial imagery and signal exploitation capability on the carrier with the RF-14 TARPS, EA-6B "Prowler," and E-2C "Hawkeye." Additionally, the CVBG has "Classic Outboard" equipped ships with HF/DF and enhanced SIGINT capabilities. A study of naval missions and intelligence collection systems while applying the principle of "economy of force" should be done in a review of naval force composition and deployment schedules.

The key deficiency in intelligence support is in HUMINT. For instance, support to the NEO forces involves locating, establishing a disposition, and evaluating the intentions of many "players." This is reliant on non-technical intelligence with emphasis on overt and covert human collection of

information. The Marine Corps must go beyond its forte in combat interrogations and detainee exploitation. HUMINT in LIC requires fine-grain qualitative analysis that is nearly at the investigative level, much like what the FBI does. It requires a different analytical mind-set and thereby produces a unique product. (Kerr interview, 1991, p.30)

HUMINT in most cultures takes a long time to develop. At the center of the HUMINT problem is collection, and the service assets do not have a mandate to operate in most places. Another problem is that the U.S. government and military bureaucracies want intelligence to be quantifiable. HUMINT, if it can be evaluated properly, can reveal enemy intentions better than most other types of intelligence, but it is difficult to quantify HUMINT successes.[6] The local populace represents the most lucrative sources of information. IRs can be met only by recording minute details on a great variety of subject areas. Each one of these details may appear unrelated to others and insignificant by itself; but when mapped and chronologically recorded over long periods of time and analyzed with other details, they may lead to definitive and predictable patterns of enemy behavior. Predicting enemy intent emphasizes the unconventional qualitative considerations of psychological, political, sociological, and economic factors.

The most intense effort for the Marine Corps must be to train in the processing of HUMINT. Processing is a five-part procedure: 1) record all human source information; 2) establish evaluation criteria for pertinence and

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[6]The author attended a class by guest lecturer, Lieutenant Colonel Terry Johnson, USA, intelligence officer and Foreign Area Officer (FAO) on 9 April 1990, at the Naval Postgraduate School, Monterey, California.

accuracy; 3) isolate the key elements of data and compare them with historical data; 4) integrate the key data using deductive reasoning and analytical methods; and 5) interpret the data to create the HUMINT product. Then, fuse the HUMINT product to all other intelligence. The need is for seamless intelligence support from national down to tactical levels. A major gap in Marine Corps intelligence is that there is no suitable structure for HUMINT support to expeditionary forces.

The concept of merging operational intelligence to tactically specific intelligence should be the focus of the Marine Corps intelligence architecture. This thesis has identified the likely type of conflict in which the Marine Corps will find itself involved in the near future. The operational and tactical intelligence requirements clearly establish themselves time and time again to become uniformities of war as it really is. One might think that a study of the problems could recommend clear solutions that make all the problems go away. But there are no perfect solutions. Problems are always going to exist and there is little that can be done to fix some of them. But, a warfighting and intelligence architecture should steer and control where that focus of effort should be; it should distinguish *which* problems are acceptable and can be tolerated from those which are unacceptable and must be remedied. Here, the criterion proposed has been *war as it really is* for the Marine Corps. One should do well what one is required to do the most; it is acceptable—when one cannot do everything—to not do as well on less likely requirements. The simple philosophy behind this is that *no* organization can do everything well—the Marine Corps must be extremely good at the mission it is uniquely assigned to perform, again and again, even if this entails sharply diminished

capabilities for missions which Marines conceivably could be—but rarely are—assigned. In short, for the down-sizing of U.S. military forces in the 1990s, the Marine Corps needs to optimize its capabilities for its highest-priority missions.

The development of an operationally oriented Marine Corps intelligence architecture remains the cornerstone of the effort in identifying IRs and deficiencies down to the likely warfighting echelon. Using a systems analysis approach, the architecture must be designed to ensure shipboard and ashore MAGTFs "plug-in" to theater intelligence assets/systems; provide a basis for developing Marine Corps intelligence capabilities; and assist all CinCs in articulating specific MAGTF IRs. Existing (sub)architectures must be subjected to a thorough cross-command analysis to further identify deficiencies. Intelligence solutions will take various forms, including acquisition of systems and changing doctrines and organizations. MAGTF units must be evaluated on the basis of their assigned missions, which in turn, are used to determine IRs. The capabilities of the intelligence node at each echelon of command are then documented as the baseline architecture and compared to a desired architecture. What the Marine Corps absolutely must do, is ensure integration of its intelligence requirements into the intelligence requirements studies conducted by service, national and defense agencies, and understand that there are long delays between identification of IRs and systems development and installation.

In designing the Marine Corps intelligence architecture, there are three factors to consider:

- First, choose where the focus of effort will be. Does the Marine Corps want to ensure its ability to talk with the British Army, as was the need

in Kuwait? Does the Marine Corps want to paint all of its equipment "white" to enhance speedy transition for operating in Norway? Should equipment be painted "sand" color because we fought in the desert for six months? Should equipment be "jungle" colored because we may fight there? The point is that the Marine Corps cannot be equally ready to do everything and operate everywhere. A choice must be made. This thesis recommends focusing on the intelligence needs of an ARG/MEU(SOC) in peacetime contingencies as our first priority.

- Second, identify the price of choosing. The Marine Corps cannot solve all of the problems incurred in planning to fight anywhere and across the spectrum of conflict. Some things will still be problems. There will always be some equally inconclusive alternative choices to make. There will be types of conflict for which the Marine Corps will not be particulary well-suited. Optimization of the Marine Corps as a force in readiness means that it will be ready for some types of military requirements at the cost of being not so ready for others.
- Finally, identify the criteria for choosing. Nothing could be more simple: what do we do most often? The author believes that there are going to be many more Lebanons, Dominican Republics, Grenadas, and Liberias than Vietnams and Operation DESERT STORMs. Focus on "war as it really is"; plan to win.

Distressingly, while the Marine Corps lacks a clearly articulated intelligence architecture that encompasses all sizes of MAGTFs across the full spectrum of conflict, the systems connectivity seems to be less a problem at MEB and MEF size units and is absolutely unsatisfactorily addressed for the ARG/MEU(SOC). The connectivity issues are not being understood and probed for solution at the MEU(SOC) level. Mission area analysis has to be done to articulate the smallest MAGTF IRs. (Thomas, Interview, 1991)

Only when the above analysis has been accomplished will the Marine Corps be able to achieve streamlined, detailed intelligence information flow to the right echelon: the tactical warfighting commander. These forces deserve full-time intelligence support of all types. Unless those who determine the direction of the Marine Corps intelligence future are ruthlessly

focused on the needs of the troops in the trenches, understand their issues, and know what commanders' objectives are, how the doctrine works, and how forces are organized, they cannot possibly provide either relevant or timely intelligence that will contribute to better informed decisions. Those who influence the battle are the people who need C^4I^2 support. The experience of the Marine Corps in conflict indicates that the national and theater decision makers obtain the necessary information to plan and execute a military response, but the information gets bottlenecked or the detail of intelligence does not have the depth beyond the "big picture." Of course, the "big picture" is easy, compared to the tactical details—but tactical details determine who lives and dies, who wins and loses. Both within the Marine Corps and in larger programmatic and operational discussions, there must be advocates of the Marine Corps' needs for critical tactical details.

The contribution this thesis has made for Marine Corps intelligence is, in one sense, nothing innovative. The thesis has taken many disparate parts of intelligence problems that recur in Marine Corps operations and put them together in a single analytic context. That context is war as it really is. The MEU(SOC) in LIC will likely be the next military requirement for Marines. Unless we improve our current intelligence support, five years from now we will see again the same deficiencies as Marines have described in after-action reports in 1958, 1965, 1983, 1984, and 1990.

APPENDIX. RAPID RESPONSE PLANNING PROCESS

The rapid response planning process is a tool for planning contingency response missions. It was developed in Fleet Marine Force Atlantic (FMFLANT) in 1988 and is now being used for MEU(SOC) training "work-ups" for all MEU(SOC)s prior to deployment. The brief description given here is from an article written in the *Marine Corps Gazette,* by Col. William M. Rakow and LtCol. Clyde S. Brinkley in June 1989 (pp.18-21). The key source is Landing Force Training Command, Atlantic located at Little Creek, Virginia.

PRIOR TO RECEIPT OF THE MISSION

- Prepare SOPs
- Identify Battle Staff and Orders Group
- Prepare generic intelligence requirements (GIR) for potential missions
- Prepare objective folders for potential "targets"
- Develop notional plans
- Conduct drills, staff exercises, and situational training exercises (STX), and
- Inspect readiness of personnel, equipment, aircraft, and ammunition

THE BASICS FOR THE SOPS

- Readiness checklists/SOPs/playbook
- Battle staff/orders group composition
- "Half Rule"
- Common reference system
- Drills, staff exercises, and STX
- Cross training

- Detailed order to include:
  - Air plan
  - Fire support plan
  - Communications plan and brevity codes
  - "Bump" and "No Go" plans
  - Withdrawal plan
  - Ammunition strike-up plan
- Preformatted confirmation brief
- Simplicity
- Weapons firing test, and
- Rehearsals

The purpose for these is so everybody knows.

In an amphibious operation, the commanders of the MAGTF and ARG become the CLF and CATF respectively. This relationship is clarified by adhering to basic doctrinal decisions. "Turf battles" must be avoided to save precious time.

BASIC DECISIONS FROM NWP-22B

PROBLEM	DECISION MAKER
• ATF general courses of action	CATF/CLF selects
• LF mission	CATF/CLF determines
• Landing sites	CATF designates
• Beachheads	CLF determines and notifies CATF
• Landing areas	CATF delineates
• LF objectives	CLF determines
• LF concept of operations ashore	CLF formulates, CATF supports
• Landing beaches	CLF selects

• HLZs/DZs	CLF selects, CATF reviews for supportability
• H-Hour/D-Day	CATF consults CLF and selects

In preparing for future missions, information collection begins well before deployment based on generic intelligence requirements. The staff creates "objective folders" that include maps, photographs, scale models, order of battle, target listings, etc. The planning process follows 14 general steps.

14 STEP RAPID RESPONSE PLANNING PROCESS

1) Receipt of mission

- Acknowledge receipt

Assemble the battle staff

2) Mission analysis

- Determine mission precedence (routine, priority, emergency)
- Analyze implied tasks
- Arrange task sequence
- Identify constraints
- If necessary, ask for clarification

Issue the standby order

3) Determine information requirements

- Enemy situation
- Capabilities
- Relative combat power
- Environment
  - Weather
  - Astronomical data

- Terrain
- Facilities
- Population

4) **Initial staff orientation**

- Ensure all "players" are present

5) **MAGTF commander's planning guidance**

- Restate mission
- Major action to be accomplished
- Assumption/previous decisions/restrictions
- Courses of action to be considered/ignored
- Phasing instructions
- Fire support guidance
  - Support available
  - Priority/significant targets
  - Priority of fires
  - Prep fires
  - Reliance on particular arm
  - CS gas employment/effect desired
  - Smoke
  - Restrictions
- Communications guidance
- Electronic warfare guidance
- OPSEC guidance
- Tactical deception
- SIGINT guidance
- Pre-assault operations
- Subsidiary landings

- Sea echelon/over-the-horizon
- Combat service support/medical
- Combat engineer guidance
- Rehearsals

6) Develop courses of action (C/A)

- Each C/A must be:
  - Suitable (accomplish mission)
  - Acceptable
  - Feasible
  - Complete
  - Follow commander's guidance
- Normally prepared by commander designated to execute the mission
- May be provided by MAGTF commander
- C/A's must provide alternatives

Courses of action

- Express task and include what, when, where, and as much of how necessary for understanding
- Prepared by GCE (or commander designated to execute the operation), and
- MAGTF commander must approve prior to estimate

7) MAGTF commander approves courses of action

8) Staff estimates

- Prepared by MAGTF staff and MAGTF elements
- Rapid
- Oral
- Based on STX experience

9) MAGTF commander's estimate and decision

- Mission

- Situation
  - Considerations
  - Enemy capabilities
  - Our C/As
- Analysis of opposing C/As
- Comparison of our C/As
- Decision, and

Issue the Warning order

10) MAGTF concept of operation

- Commander's intent
- Task organizing for combat
- Principal objectives
- Scheme of maneuver
- Method of landing
- Fire support concept
- Communications concept
- Combat service support concept
- Phasing/sequence of major events

11) Preparation of detailed plan

- Review existing plan
- Select plan or run "audible"
- Modify plans

12) MAGTF commander's approval and,

Commander's confirmation brief

13) Issue the order

14) Commander and staff supervision

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